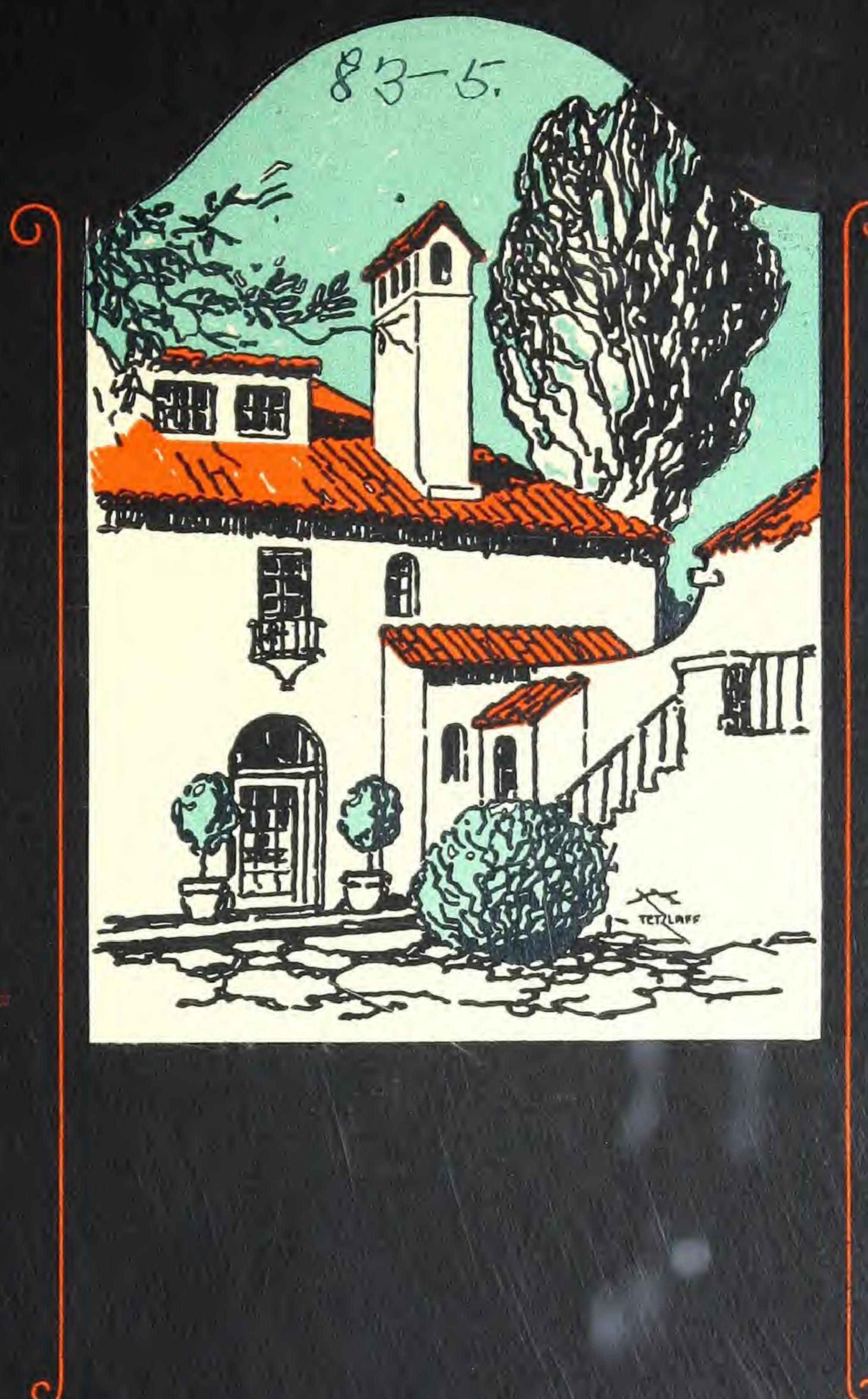


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MILCOR, ARCHITECTURAL SHEET METAL GUIDE

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MILCOR,

ARCHITECTURAL SHEET METAL GUIDE

A Reference Book
on Milcor Sheet Metal Building Products

Including

"Titelock" Metal Tile and Shingles
Roof Trimmings, Sheet Metal and Roll Roofings
Industrial and Barn Ventilators
Ornamental Cornices
and Canopies
"Invisible Joint" Metal Ceilings
Ornamental and "Crimpedge" Gutters and
Zinc and Copper Architectural
Ornaments

Catalog No. 24

MILWAUKEE CORRUGATING COMPANY
MILWAUKEE, WISCONSIN

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The MILCOR,
ARCHITECTURAL
SHEET METAL GUIDE
"—for the Good of the Building"

Beauty *plus* Firesafeness

TO the Architectural profession and the Building Trade in general, the importance of building for firesafeness has assumed the proportions of a profound duty. Each year preventable fires snuff out thousands of lives. Every four minutes some dwelling burns — every seven minutes fire destroys some farm building. Fifteen hotels, five schools, five churches and a hospital are included in the average *daily toll* of fire. More than a half billion dollars annually is the loss through these ravages of fire.

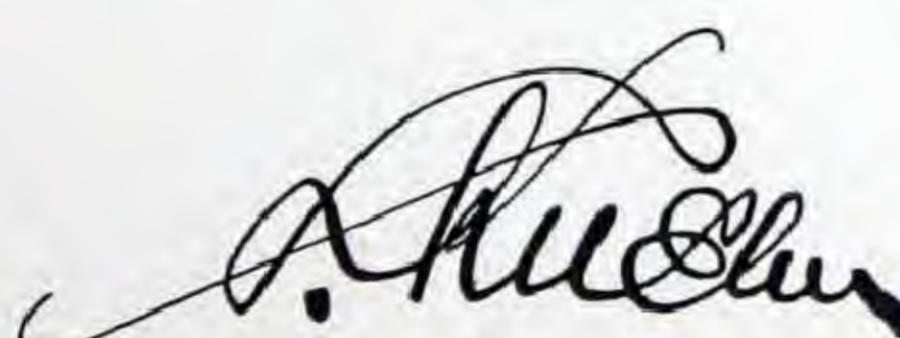
Without the slightest sacrifice to architectural beauty, thousands of lives and many millions of dollars can be saved every year by specifying Milcor Art Metal Roofings and other Milcor Products.

Experience has demonstrated to many Architects, Engineers, Contractors, Carpenters, Dealers, and others, that the excellence represented in Milcor Architectural Sheet Metal is something which cannot be purchased through dollars and cents competition.

Such excellence is no accident. It is the result of years of effort, proper application of experience, adequate equipment, and highest manufacturing ideals.

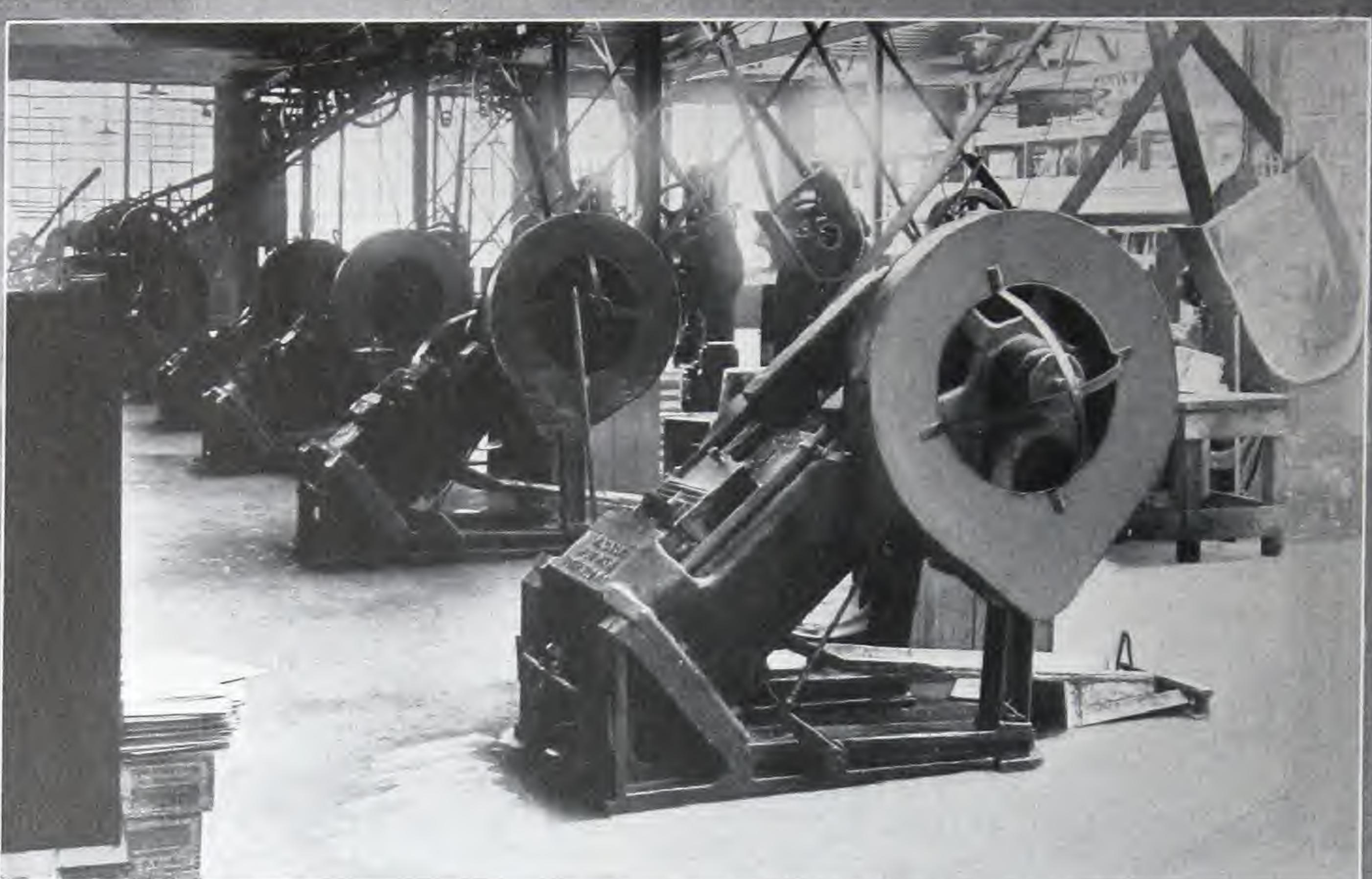
From the standpoint of beauty and propriety, as well as economy and endurance, Milcor Metal Tile, Shingles, Ceilings, Cornices, Skylights, Ornaments, etc., thoroughly deserve the broad recognition accorded them by Architects and Builders.

Architectural Specifications are outlined throughout various sections of this Data Book, covering the application of the products under discussion. At any time, the Milcor Engineering Division will be pleased to submit "lump-sum" estimates or "Quantity Surveys" on any portions of a building involving possible use of Milcor Products. No obligation whatsoever. Make use of this service.

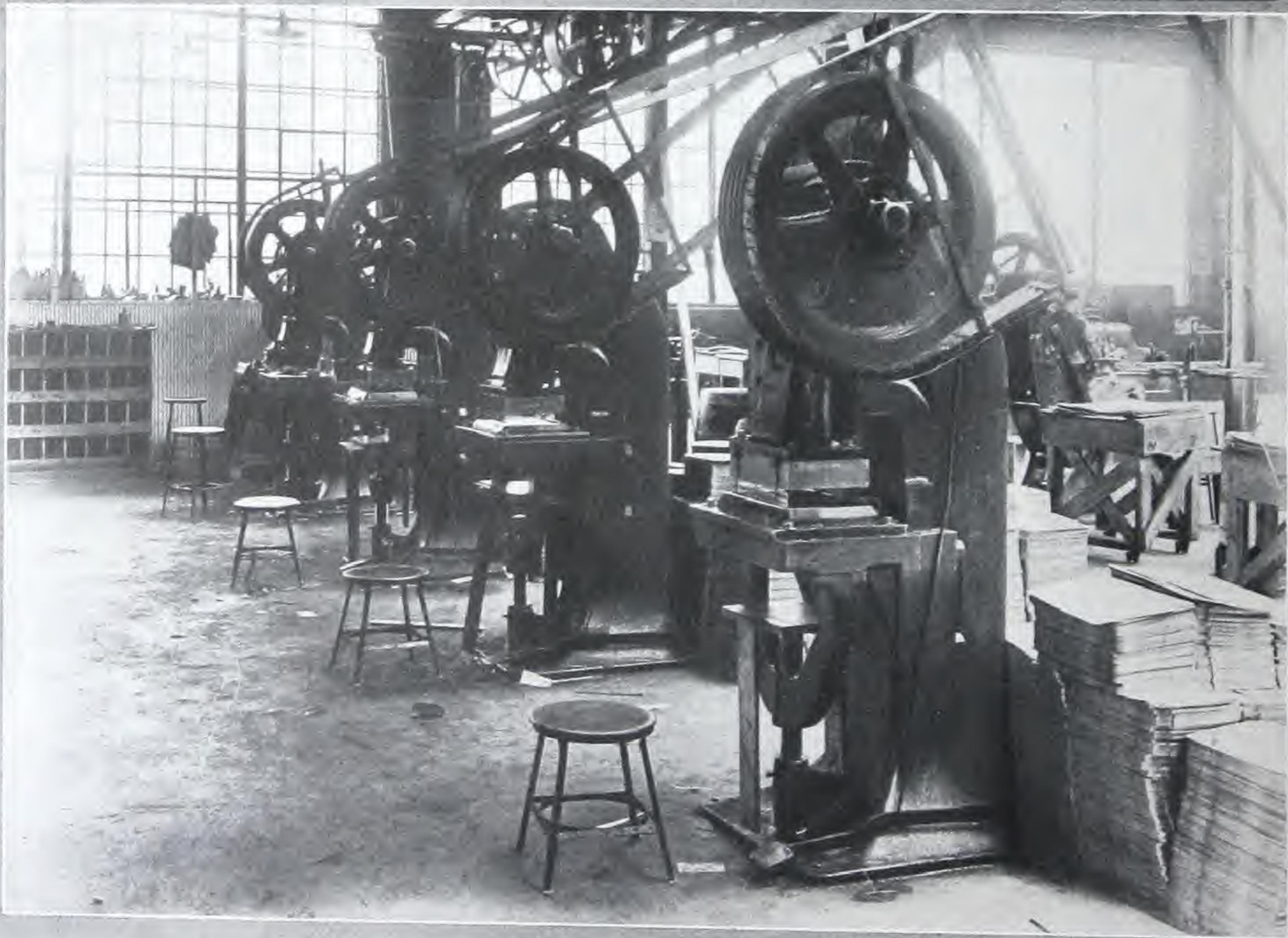


A. H. Lush President

Milwaukee Corrugating Company



THESE BATTERIES OF PONDEROUS PRESSES
HAVE PRODUCED MILLIONS OF
MILCOR "TITELOCK" METAL TILES, SHINGLES AND SLATE



"**TITLELOCK**", the Secret of **MILCOR**, Metal Roof Superiority



THE complete "Titelock" line in Milcor Metal Roofing includes the following units: Spanish Metal Tile; American Metal Tile; Art Metal Shingles (in three styles); Metal Slate, and suitable Metal Trimmings for each type.

In all of these units the Titelock feature is embodied. This unique sidelock is the detail that makes Milcor Metal Tile, Shingles and Slate so successful.

Fire Safeness Reduces Insurance

Red hot sparks, burning embers or firebrands, falling on Milcor Metal Roofs, fade away and die without causing the slightest damage. Lightning, too, is rendered harmless — is shunted off and carried down into the ground by Milcor Conductor Pipes and rain spouts. Lightning gets no chance to wreck buildings thus protected.

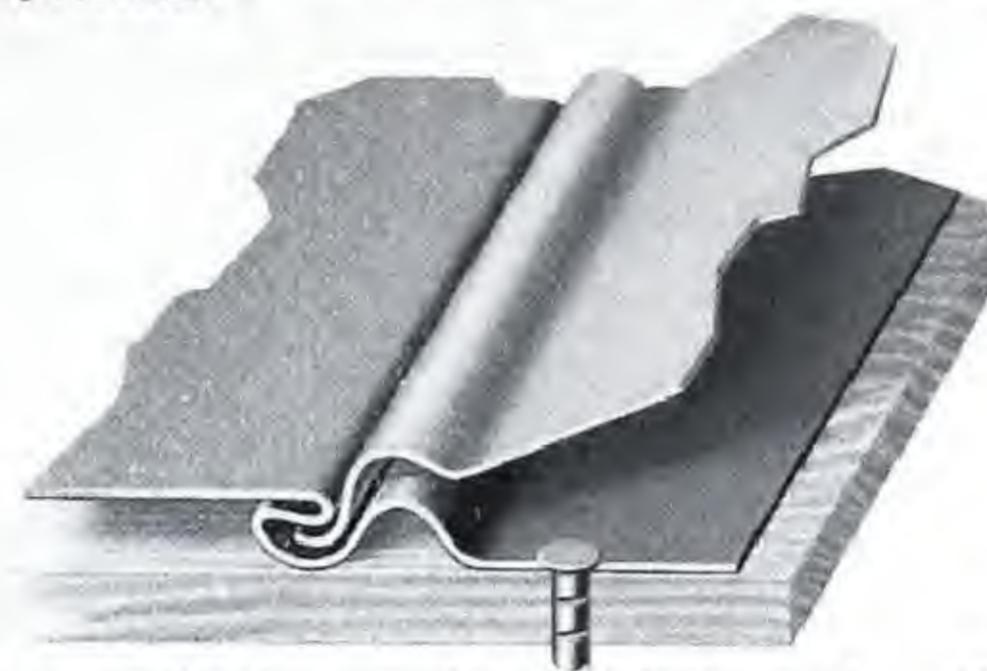
The facts pertaining to the fire-and-lightning resistance of metal roofs have been so definitely established that lower insurance rates now apply on metal-roofed buildings. In most localities 25% to 40% is saved.

Economy and Permanence

Ordinary, light wood sheathing is sufficient for Titelock Roofs. Their light weight does not demand heavy, special structural work throughout the building as some heavy tile roofings do. First cost is low — upkeep expense can be disregarded entirely because these permanent metal roofs cannot crack, break, warp, curl or rot — and their extreme durability also contributes to the fact that, in terms of service, these are the most economical roofs known.

Starting at the left, lower corner of the roof, the first row is laid to a chalk line. After inserting the flange (on the left edge of the tile or shingle) into the slot on the right edge of the preceding tile or shingle, an inseparable LOCK occurs — a tight joint through which no water or moisture can work its way. When the Titelock roof is laid, there is no possibility of joints separating.

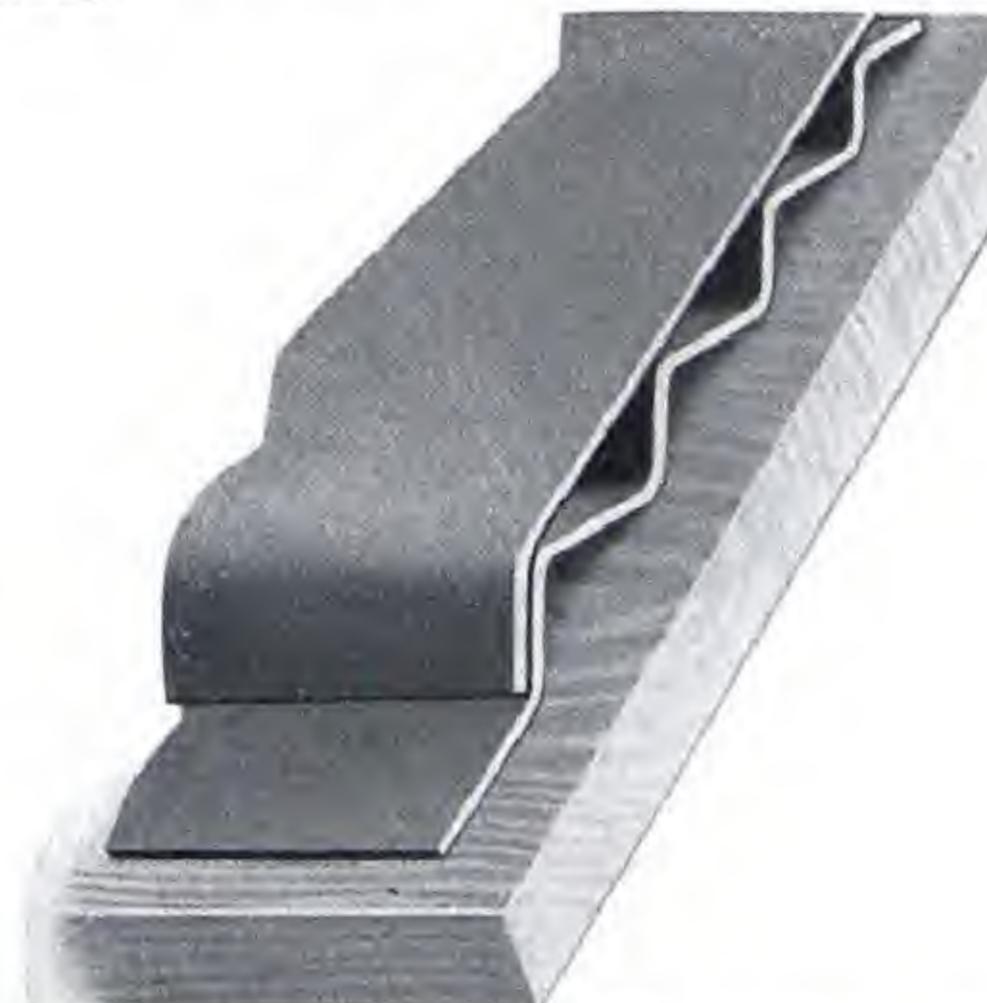
Notice the end caps on the "Starter Tile" in the bottom row to the left. These Starter Tiles are furnished complete, as shown. The end caps, instead of being soldered, are seamed tightly to the tile, thus making leakage impossible.



Any mechanic can lay Titelock roofs. No special tools are required — ordinary Tinner's Snips, hammer and nails are sufficient. No solder necessary — the efficiency of the Titelock feature obviates the use of solder at any joints. A carpenter can ordinarily lay Titelock faster than wooden shingles.



Every nail hole and nail head is completely covered when the next Titelock unit to the right is connected and laid flat in its proper place. Not a single spot is exposed for water to get through.



The ribs at the top of each Titelock unit effectively prevent backing-up of melting snow or water under the roof. Leakage induced by capillary attraction is impossible here. Rain or snow cannot be driven in under the metal surface at any point.

MILCOR

ARCHITECTURAL SHEET METAL



Beautiful!

To the rare beauty and charm of that quaint, heavily-ribbed tile of old Spain, add the practical advantages of metal, plus the weather-baffling "Titelock" design. The result is Milcor Spanish Metal Tile, the most practical adaptation of this popular architectural motif in roofing.

Weighing only one-eighth as much as clay tile and, therefore, requiring only a light supporting structure, a substantial saving in time, labor and materials is obtained.

Easily finished in any color scheme desired — although regularly furnished in red, green or galvanized Copper-bearing Terne Plate or in Pure Copper — this roofing lends itself ideally to the general artistic scheme of the building. Universally accepted as good taste.





Enduring!

THE length of service rendered by Milcor Metal Roofs depends somewhat on the material specified—but, in general, these roofs will outlast the building.

Milcor Pure Copper Tile are everlasting. They cannot corrode, they show no effects of wear and they need no attention. Milcor "Copper-bearing" Terne Plate, Painted or Galvanized, should be repainted every four or five years—the frequency of repainting depending on local climatic conditions. When given reasonable care, such roofs render perfect protection for fifty to one hundred years.

Extremes of temperature have no effect on Milcor "Titelock" roofs. The ravages of ice, snow, driving torrents of rain and heavy winds cannot crack, chip, or break them.





MILCOR Titelock Spanish Tile

ON the finest residences, apartment buildings, hotels, churches, theatres, hospitals, schools, libraries and other public buildings, railway stations, garages, filling stations, etc., this artistic and practical roofing is being specified more and more by Architects all over the Country.

Mechanical Specifications: Milcor "Titelock" Spanish Metal Tile

	Individual Spanish Field Tile	Individual Closed-End Spanish Starter Tile	Twin Spanish Field Tile	Twin Closed-End Spanish Starter Tile
Actual Size.....	10 x 14	10 x 14	18½ x 14	18½ x 14
Coverage Size.....	8½ x 12	8½ x 12	17 x 12	17 x 12
Number of Units per Square.....	144	144	72	72
Weights per Square:				
IC — Painted	100 lbs.	125 lbs.	100 lbs.	125 lbs.
IX — Painted	127 lbs.	152 lbs.	127 lbs.	152 lbs.
IC — Galvanized after Formed	120 lbs.	145 lbs.	*	*
IX — Galvanized after Formed	147 lbs.	172 lbs.	*	*
Cut from Galvanized Sheets..	*	*	130 lbs.	155 lbs.
14-Ounce Copper	180 lbs.	200 lbs.	*	*

* Not furnished in these grades.

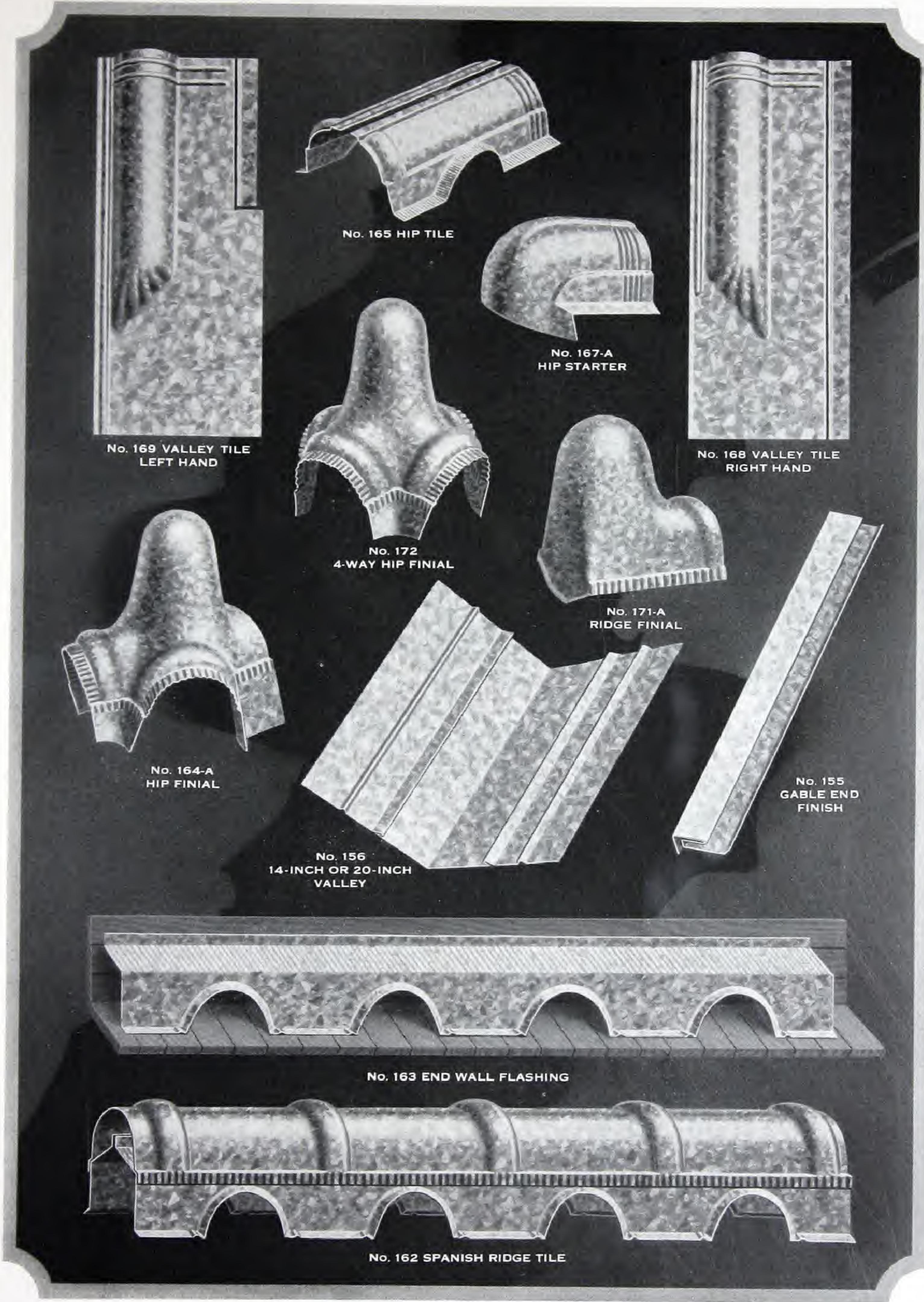
Architectural Specifications:

All roofs shall be covered with Milcor "Titelock" Spanish Metal Tile, manufactured by Milwaukee Corrugating Company, Milwaukee, Wis., in accordance with the following specifications and with the manufacturer's drawings. Tile to be made from: (Consult data above. Specify whether Terne Plate Galvanized, or Painted Red or Green, or 14-ounce Pure Copper. If painted, specify "with a mixture of iron oxide and linseed oil inside and outside before applying roof." If galvanized, specify what color scheme is desired for painting after applying roof.)

Preparation of Roofs: All roof boards shall be laid closely together and shall be covered with a good grade of Building Paper or felt, free from any tar or acids. All paper shall be laid perfectly smooth and shall be well lapped and nailed securely in place.

Application: Commence laying the tile at the lower left-hand corner of roof when facing ridge. "Titelock" Closed-end, starter-tile shall be used on lower course. Lay to chalk line to keep course straight at bottom. Copper Tile shall be nailed with copper nails.

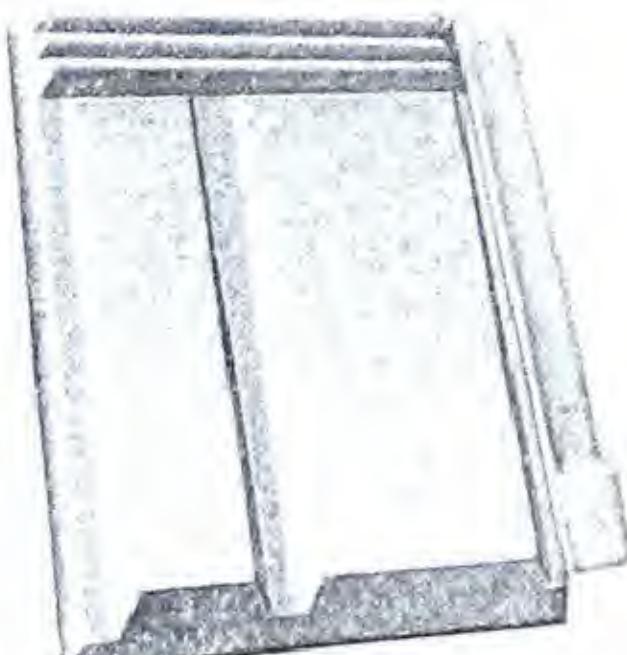
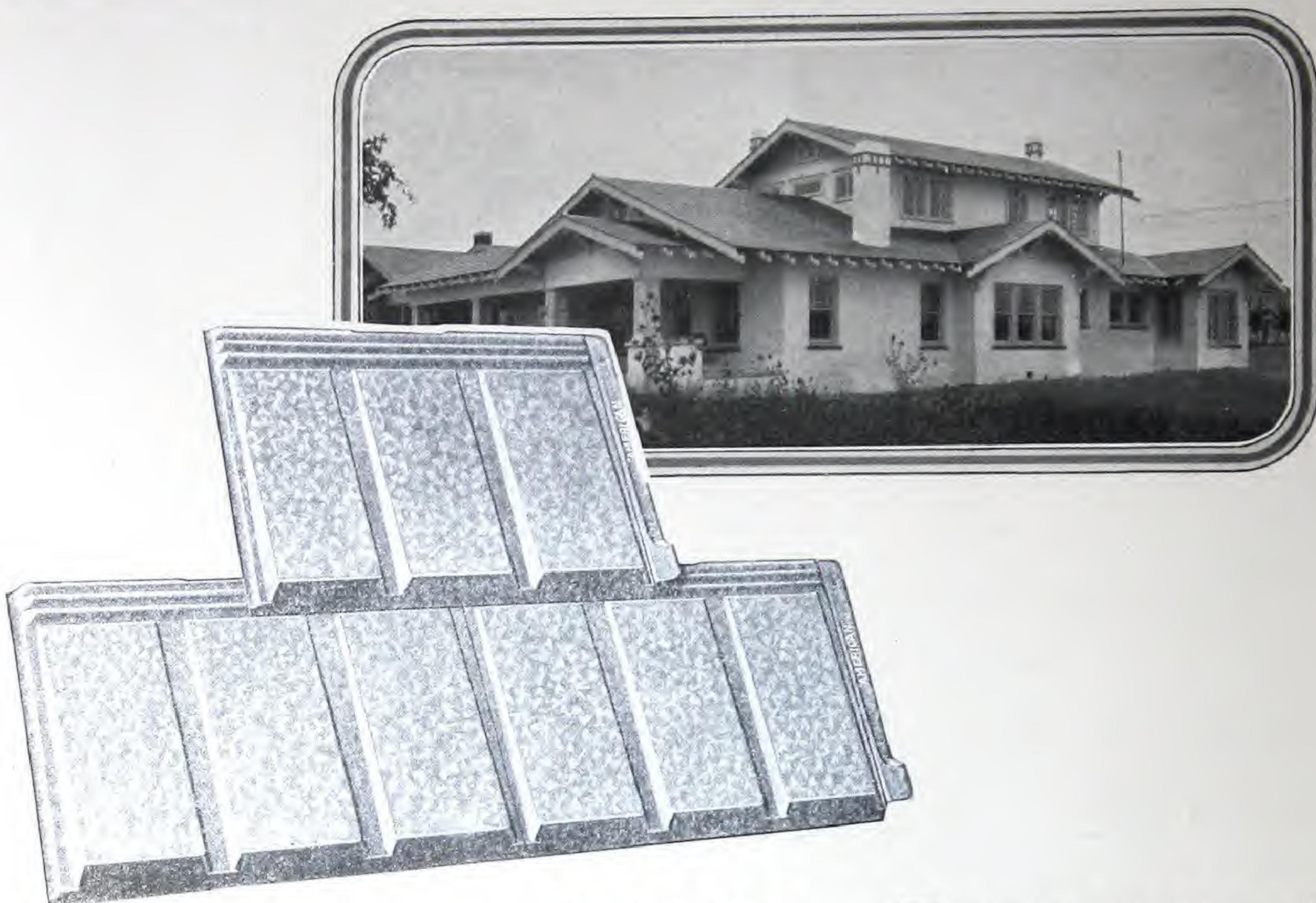
(See pages 16, 17, and 18 for construction details involving proper trimmings, etc.) *Quantity Surveys, and Estimates on Request.*



Spanish Tile Trimmings — For Construction Details See Pages 16, 17 and 18.



ARCHITECTURAL SHEET METAL



Starter Tile

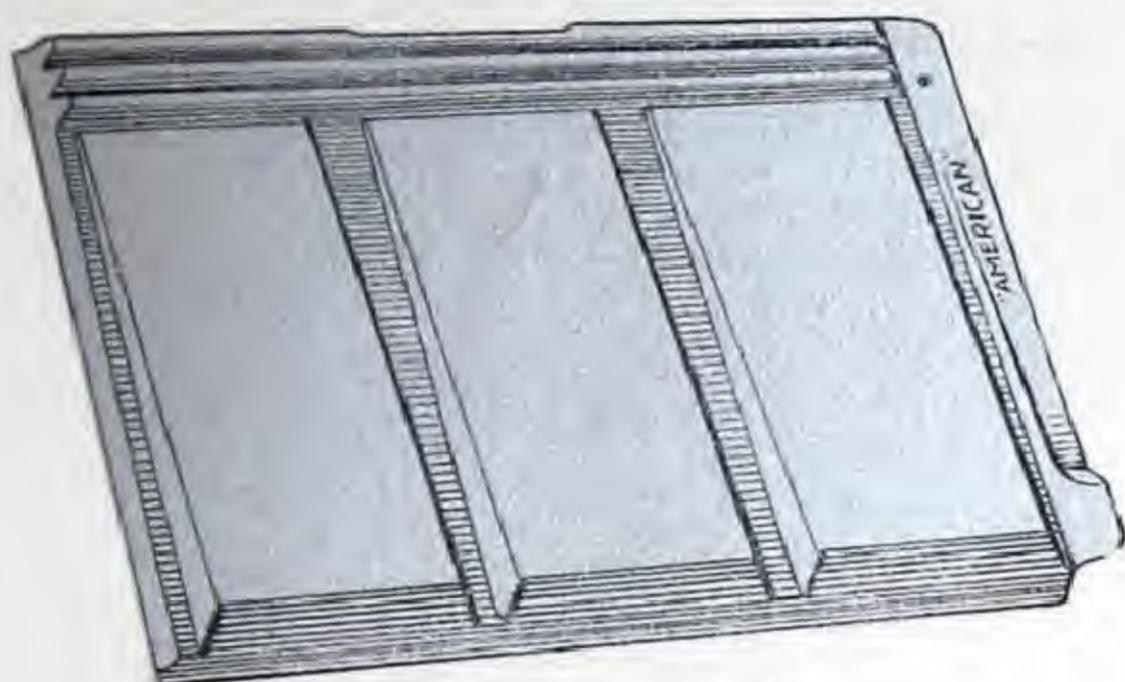


Artistic—Economical

THE attractive roof-effects produced by Milcor Titelock American Metal Tile cannot be obtained in such thoroughly practical manner by any other type of roofing.

The design is sufficiently bold to create strong lights and shadows — a pleasing combination of neat panels — a quality effect which never grows tiresome. The precision in appearance which is so desirable in heavy slate, or in flat, clay-tile roofs, is obtained through American Metal Tile, but the excessive weight of slate or clay is avoided and the supporting structure can be built just as light and as economically as for ordinary wooden shingles or composition roofs.

Exceptionally pleasing color effects can be obtained, in beautiful harmony with the rest of the building. And these Milcor American Metal Tile Roofs are as practical as they are good to look at — cracking or breakage cannot occur, there is no fire-hazard nor danger from lightning, no warping, curling or rotting — no leakage under any circumstances of weather.



MILCOR "Titelock" **American Tile**

THE formation of each tile — and this is true also of Milcor Spanish Metal Tile — is such that air pockets are formed, which act as an insulating air blanket after roof is laid. This insulating layer of air is an effective aid in warding off summer's heat and winter's cold, as well as making roofs sound proof.

The "Titelock" feature has value from a sanitary standpoint, too. It keeps out dust as well as rain and wind. Rooms directly under "Titelock" roofs are kept clean more easily.

And for people who have cisterns for rain water, any Milcor Metal Roof is ideal, because these roofs do not discolor rain water nor pollute it with tar or oil products and there are no pebbles to wash off and clutter up the rain spouts or cistern.

Mechanical Specifications: Milcor "Titelock" American Metal Tile

	Actual Size	Coverage Size	Weights per Square:			Number of American Tile per Square
			IX Painted Red or Green	IX Galv. after Formed	Cut from 14-Ounce Pure Copper	
Individual American Field Tile	14 x 10	12 x 18	102 lbs.	105 lbs.	136 lbs.	148
American Starter Tile	7 x 10	6 x 8	112 lbs.	115 lbs.	145 lbs.	296

Architectural Specifications:

All roofs shall be covered with Milcor "Titelock" American Metal Tile, manufactured by Milwaukee Corrugating Company, Milwaukee, Wis., in accordance with following specifications and with manufacturer's drawings. Tile to be made from: (Consult Tabular Data above. *Specify whether Terne Plate Galvanized or Terne Plate Painted Red or Green or 14-ounce Pure Copper. If painted, specify "with a mixture of iron oxide and linseed oil inside and outside before applying roof." If galvanized, specify what color scheme is desired for painting after applying roof.*)

Preparation of Roofs: All roof boards shall be laid closely together and shall be covered with a good grade of Building Paper or Felt, free from any tar or acids. All paper shall be well lapped and nailed securely in place.

Application: Commence laying the tile at the lower left-hand corner when facing ridge of roof. Lay to chalk line to keep first course straight at bottom. Begin second course and every second course above it, with half-size American Starter Tile, thus staggering the panels in a manner similar to the usual practice of laying wooden shingles.

Approximately one pound of Zinc-coated Nails are required per square. For Pure Copper Tile, use copper nails always.

Send roof plans from which we can furnish Lump-sum Estimates or Quantity Surveys on any specific job, without cost or obligation to you.



MILCOR “Titelock” Art Metal Shingles

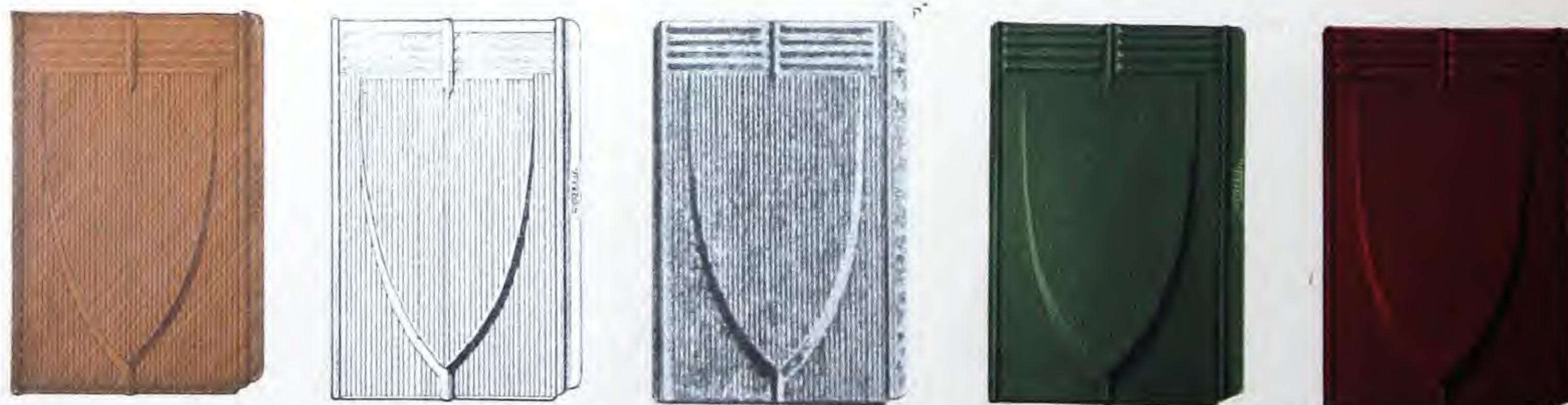
To the owner of the building, the Milcor Titelock feature means a great deal. Our extensive National advertising has educated the Public to appreciate the advantages available only in this type of roofing.

To the Architect and Contractor, Milcor “Titelock” also means much, because the superiority of this modern roofing results in work that is successful in the broadest sense of the term — a service well rendered, owners thoroughly satisfied, repeat business and profit — fine enough for the most costly dwelling — in good taste on any structure.

Invariably the building roofed with Milcor Titelock Art Metal units is recognized as worth more and can be sold easier and at a higher price than it ordinarily would bring.

Titelock Art Metal Shingles, furnished in three designs, A, B, and C — offer an interesting medium for distinctive roof effects, especially for churches, theatres, business blocks, and public buildings.

Two sizes are available. The larger size intended for the main roofs and the smaller size for towers and gables or similar subsidiary portions of the roof.





Style "A"



Style "C"

For Architectural Specifications follow details similar to those on page 11, inserting

style and grade desired. For Trimmings and Valley fitting data see pages 15 to 19.

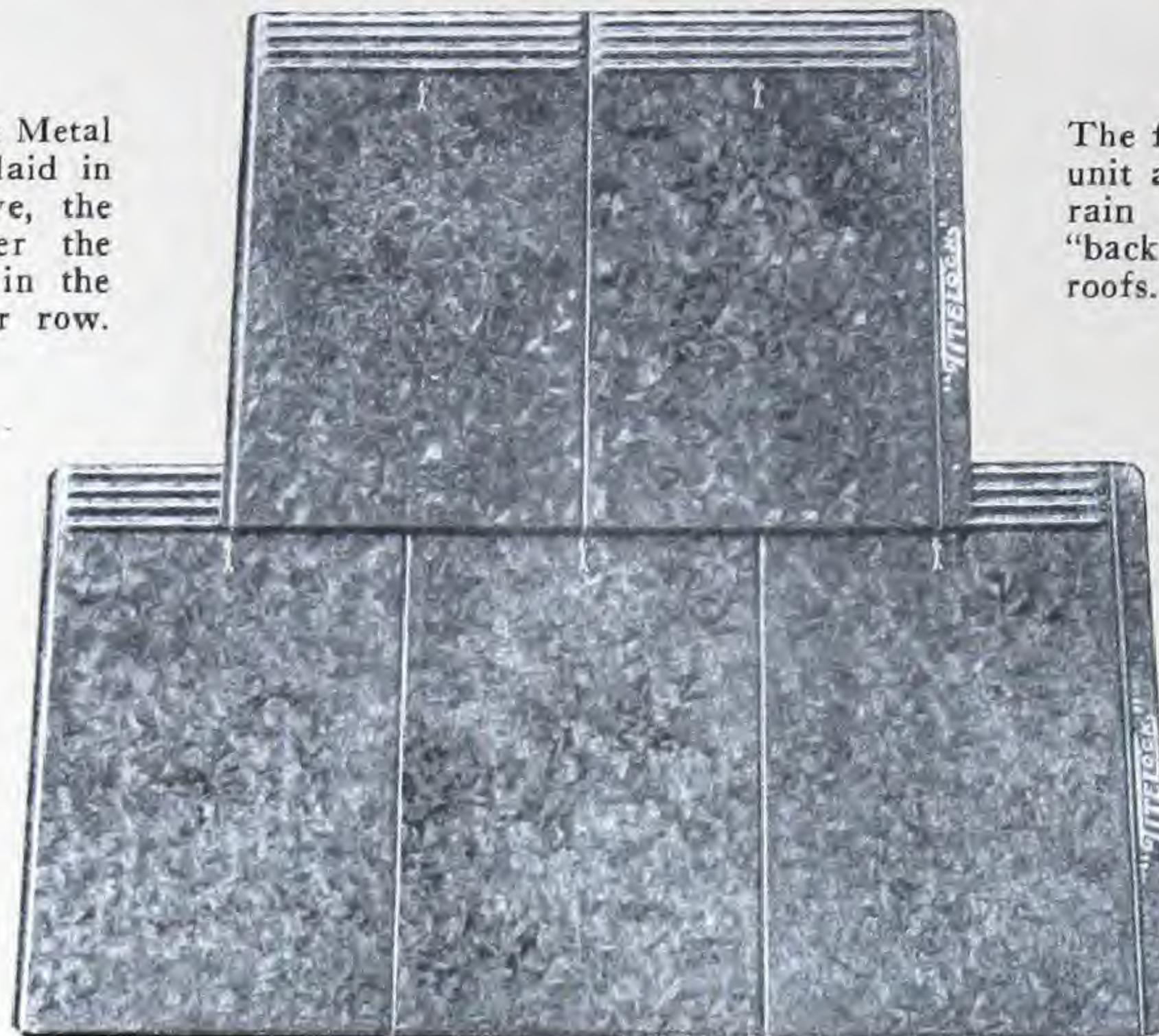
Mechanical Specifications: Milcor "Titelock" Art Metal Shingles

Coverage Size	Number per Square	SHIPPING WEIGHTS PER SQUARE:											
		Terne Plate Painted Both Sides		Terne Plate Galvanized after Formed		Cut from Tight Coat Galvanized Sheets	Pure Horsehead Zinc				Pure Cold-Rolled Copper		
		IC	IX	IC	IX		No. 7	No. 8	No. 9	No. 10	12-Oz.	14-Oz.	
Style "A"—14"x10"....	12"x8"	148	86	102	95	105	105	85	96	106	120	120	136
Style "A"—7"x10"....	6"x8"	296	96	112	105	115	115	*	*	*	*	*	*
Style "B"—14"x10"....	12"x8"	148	86	102	95	105	105	85	96	106	120	120	136
Style "B"—7"x10"....	6"x8"	296	96	112	105	115	115	*	*	*	*	*	*
Style "C"—14"x10"....	12"x8"	148	86	102	95	105	105	85	96	106	120	120	136

* Not regularly furnished in these grades.



All styles of Titelock Art Metal Shingles and Slate are laid in the manner shown above, the edge fitting snugly over the bead, or at the arrow in the center of the next lower row.



The four ribs at the top of each unit are four good reasons why rain or melted snow cannot "back up" underneath Titelock roofs.

MILCOR "Titelock" Metal Slate

THIS metal slate—or style "D" Titelock—is justly popular for the precise, neat effects it produces. It is offered in two sizes, 10 inches by 14 inches and 7 inches by 10 inches.

By staggering each unit as above, all possibility of leakage at joints of units is eliminated and ideal, artistic effects are obtained.

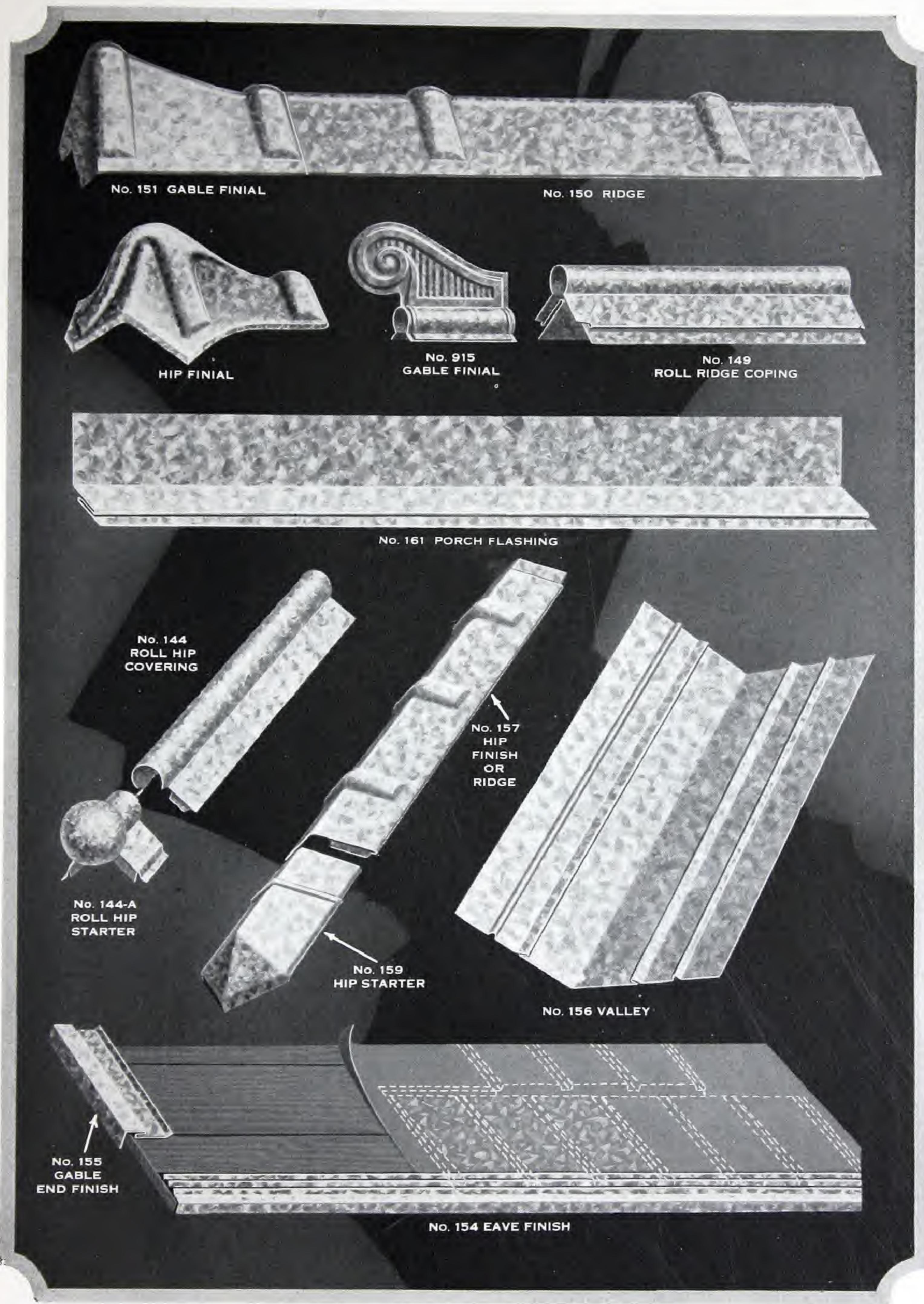
No other fitting is required except at valleys or around dormer-windows. Such details are explained on pages 16, 17, and 18.

For Architectural Specifications follow details similar to those on Page 11, inserting style and grade desired. For Trimmings and Valley fitting data consult pages 15 to 19. Send roof plans for lump-sum estimates.

Mechanical Specifications: Milcor "Titelock" Metal Slate—Style "D"

Actual Size	Coverage Size	Number per Square	SHIPPING WEIGHTS PER SQUARE:								
			Terne Plate Painted Both Sides		Terne Plate Galvanized after Formed		Cut from Tight Coat Galvanized Sheets	Pure Horsehead Zinc			
			IC	IX	IC	IX		No. 7	No. 8	No. 9	No. 10
14" x 10"	12" x 8"	148	86	102	95	105	105	85	96	106	120
								12-Oz.	14-Oz.		
								120	136		





Titelock Trimmings Adaptable to American Metal Tile, Art Metal Shingles and Metal Slate.

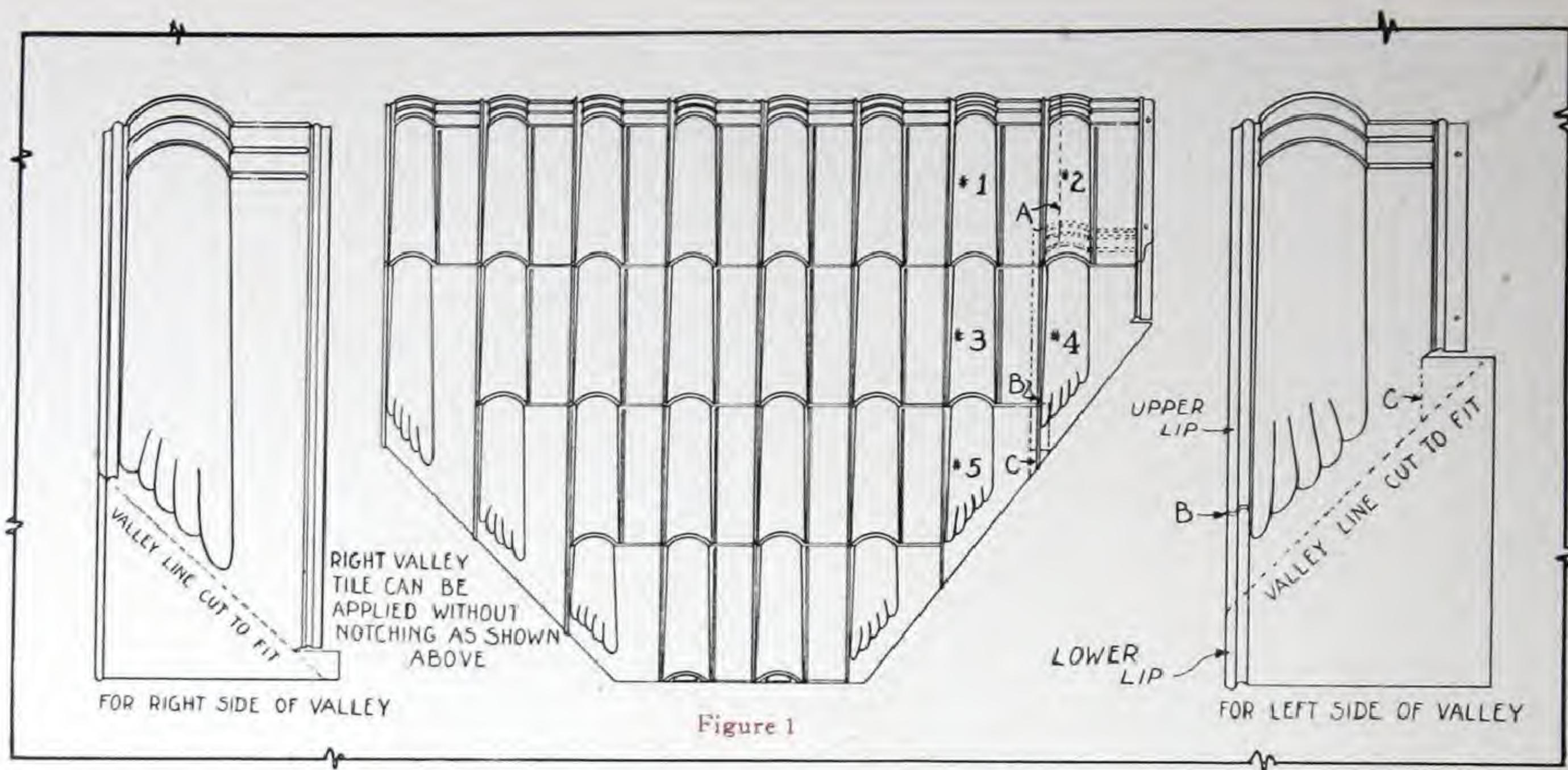


Figure 1

Architectural and Construction Details for Milcor Art Metal Roofing and Trimmings

Application of Milcor Spanish Metal Tile: Commence laying closed-end Starter Tile at lower left-hand corner when facing the ridge. Use chalk line to keep the first course precisely straight. With this straight, the rest of the roof will naturally come straight. The second and subsequent courses are laid with regular, open-end tile, always starting at the left. The joints continue straight up on this type—not staggered as with American Tile, Shingles and Slate.

At Valleys (figure No. 1, above) use right and left Valley Tile No. 168 and No. 169 respectively, as illus-

trated on page 9. The Nailing Flange "A" on tile No. 1 is bent up to fit over Valley Tile No. 4. Tile No. 2 locks into Tile No. 1, covering Nailing Flange "A." Notch Valley Tile No. 4 at point "B," where Valley Tile extends beyond regular tile. The upper lip of Valley Tile No. 4 fits into the lock of Tile No. 3, while the lower lip on Valley Tile No. 4 fits into the lock of Valley Tile No. 5. Flange "C" on Valley Tile No. 5 underlaps Valley Tile No. 4.

Cut the Valley Tile to the same angle as the Valley, allowing a projection of about one-half inch over the

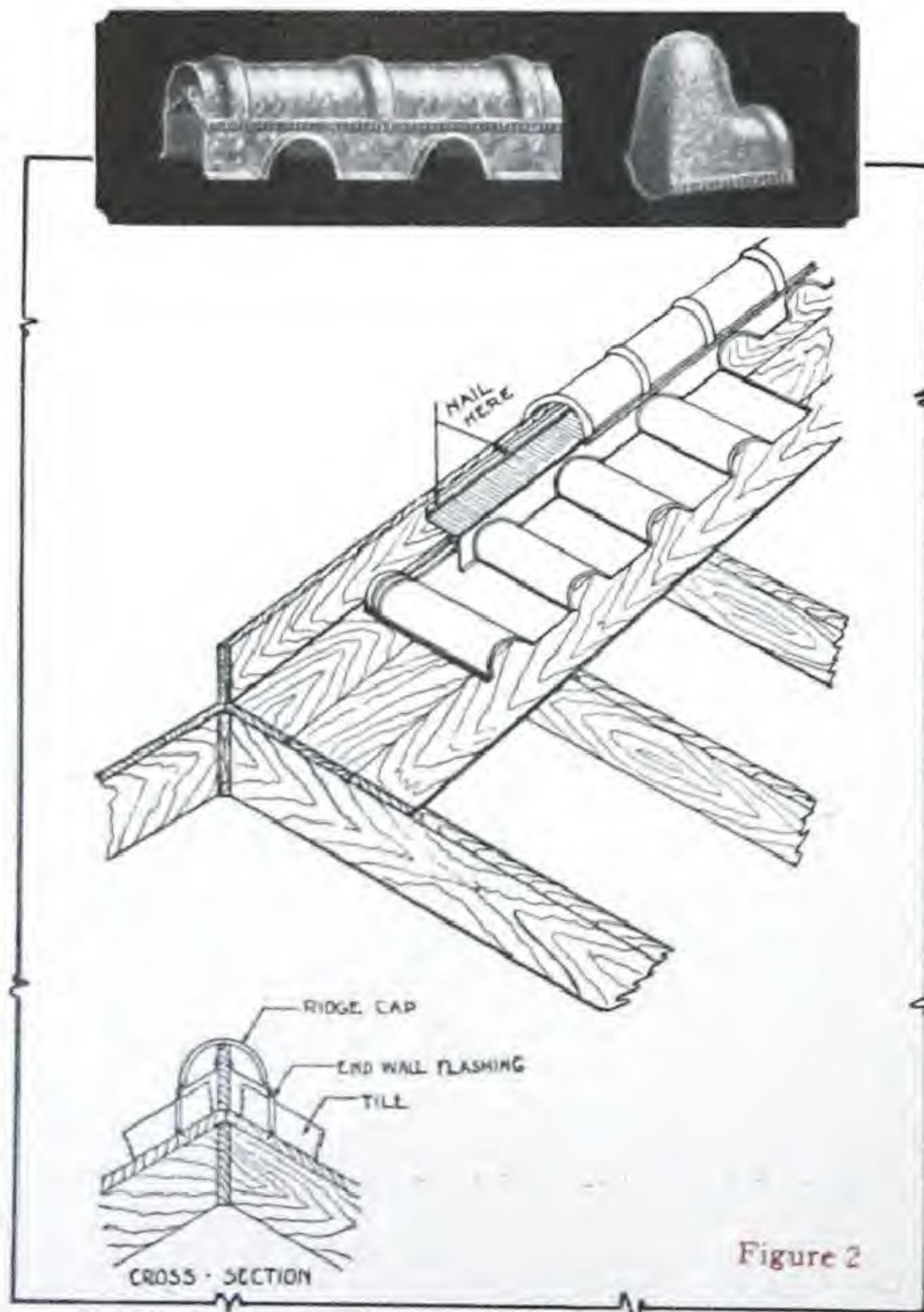


Figure 2

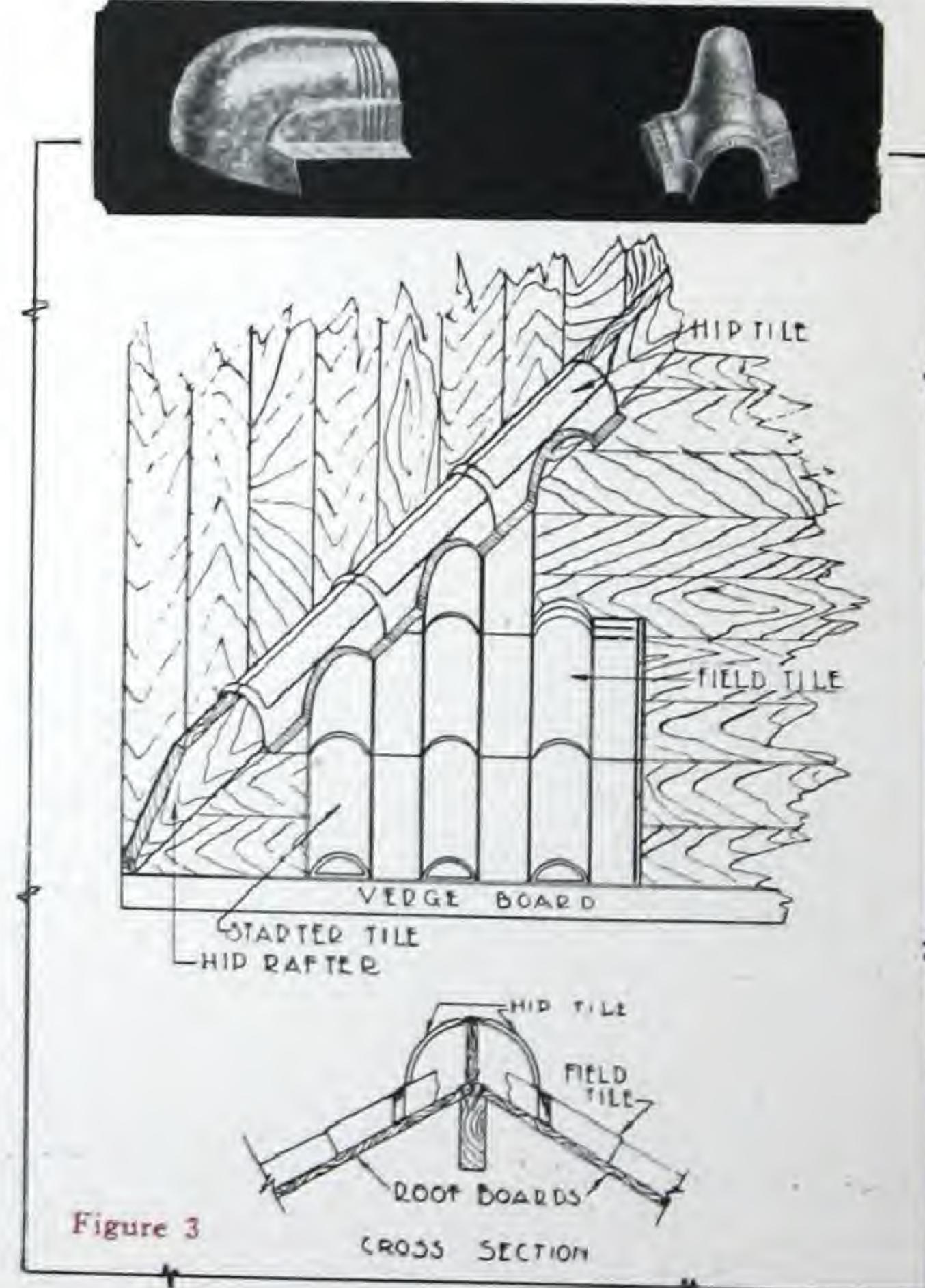


Figure 3

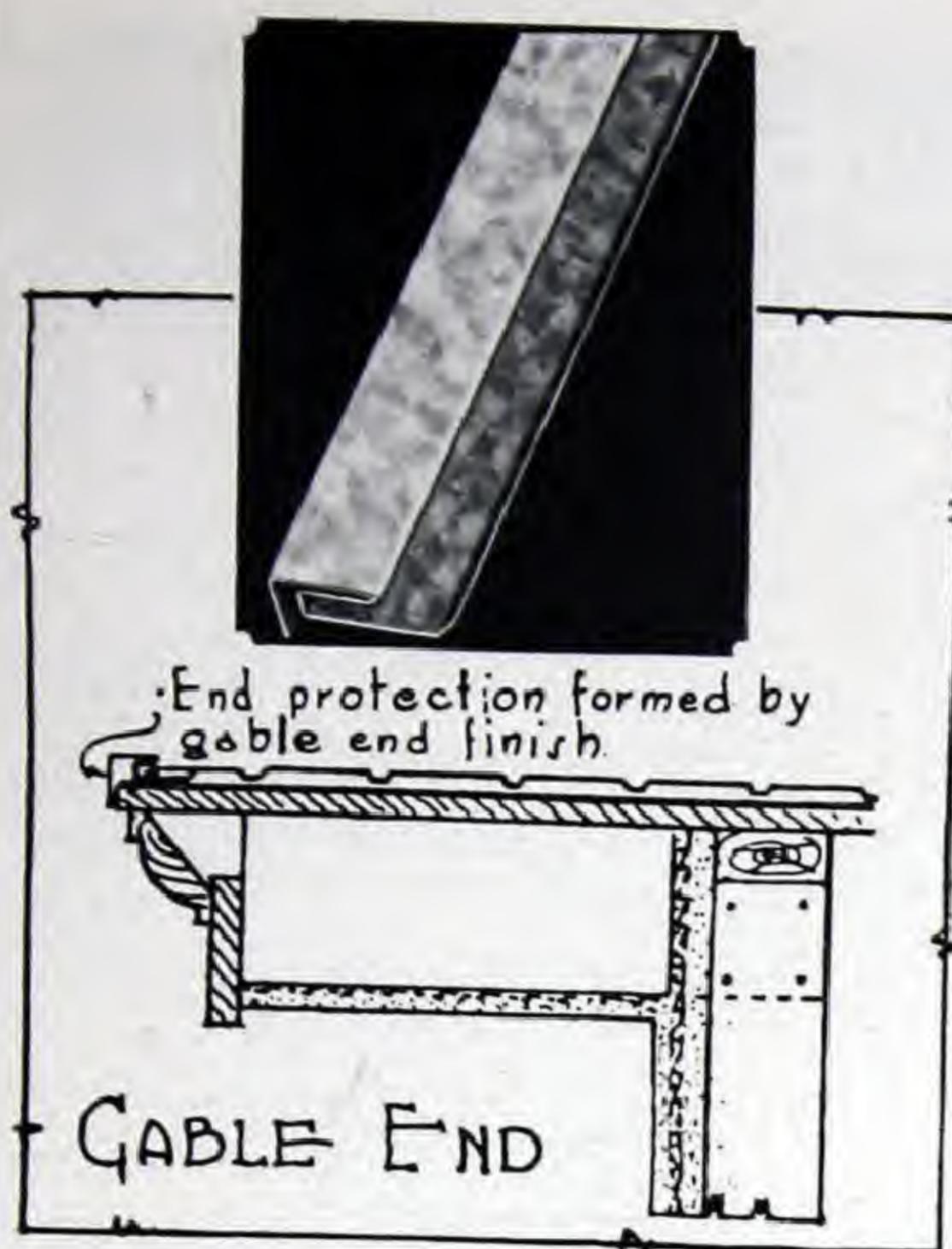


Figure 4

fold nearest the break. Bend the projecting part of the tile to form a hook over the fold, after which a hand tongue or any other suitably-shaped tool can be used to lock the tile to the fold in the Valley.

At End Walls and Ridges, (Figure 2), use End Wall Flashing No. 163 and Ridge Tile No. 162, respectively, as illustrated on page 9, wherever the Field Tile run dead into wall, dormer, chimney, skylight, etc., or ridge. This Flashing is stamped and cut out so as to fit snugly over raised part of Field Tile. The sides of various projective surfaces are flashed by bending the tile so that it projects up the side of the wall, etc., not less than 3 inches, and then counterflashed down to within 1 inch of the roof. Hip Finial, No. 164-A or No. 172, are used as required.

At the Hip (Figure 3) nail a board 1 inch x $5\frac{1}{2}$ inches, on edge, on the top of roof boards and in line with the hip rafter. Field Tile are then cut at angle to fit against this board. At the eave end of hip, No. 167-A Hip Starter, illustrated on page 9, should be applied — then the application of Hip Tile No. 165 can begin. Hip Tile are made in two parts — right and left. Looking at the ridge, the right half of the hip should be applied first

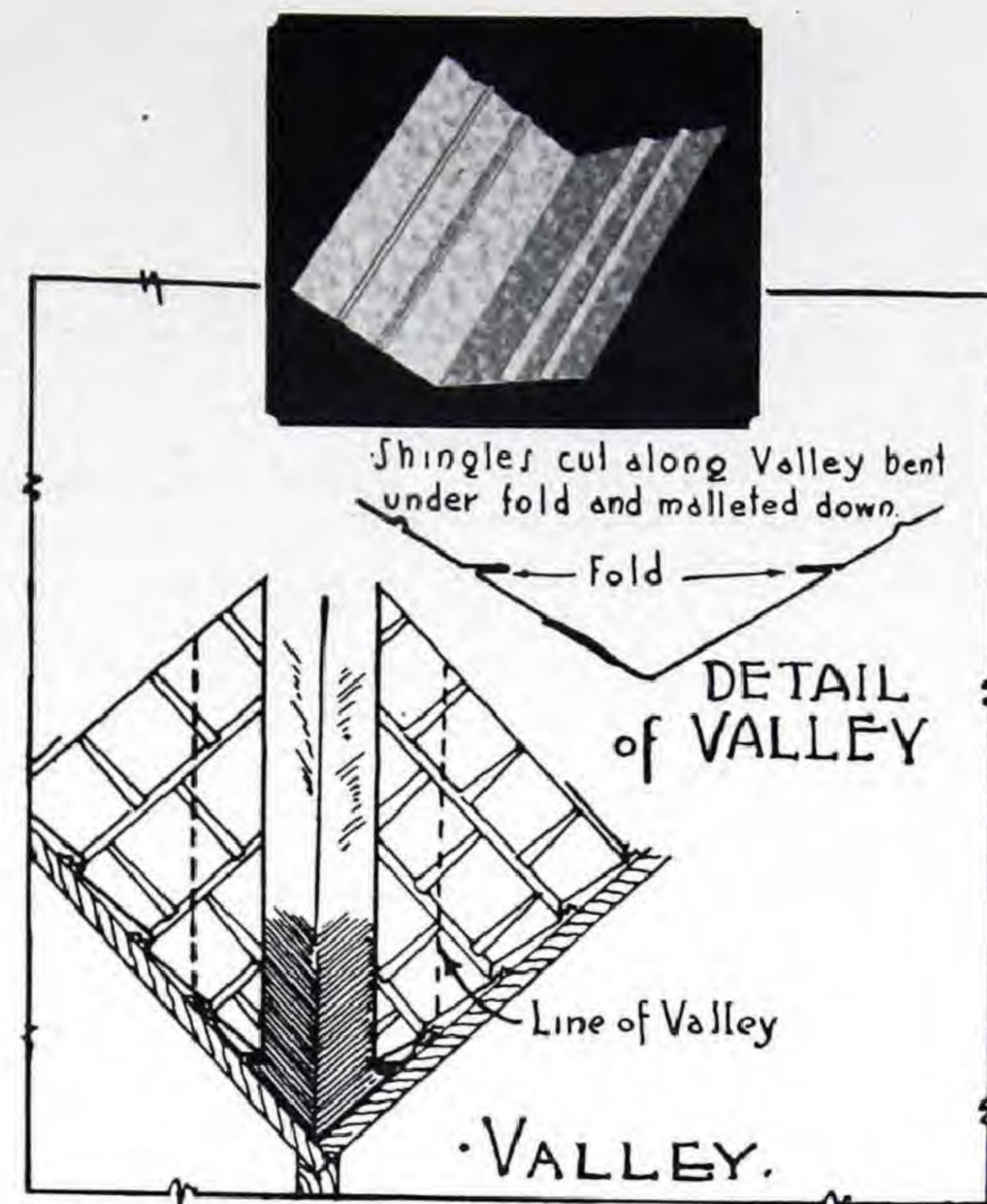


Figure 6

and then the left half lapped over the right on top of the board. Hip Tile are cut out so as to fit over the raised part of the Field Tile. To make a finished appearance where two hips meet, a finial is furnished.

At the Gable, on verge end (Figure 4) for all types of Milcor Roofs, Gable End Finish No. 155, as illustrated on page 9, should be used. At the left gable (when facing ridge) the Gable End Finish must be in place before

CHIMNEY AND DORMER SIDES

Shingles are bent up to fit about 3 inches onto the sides of dormer or chimney and then counterflashed. Saddle built up, flashed and counterflashed, extending flashing about 6 inches under shingles at top and sides.

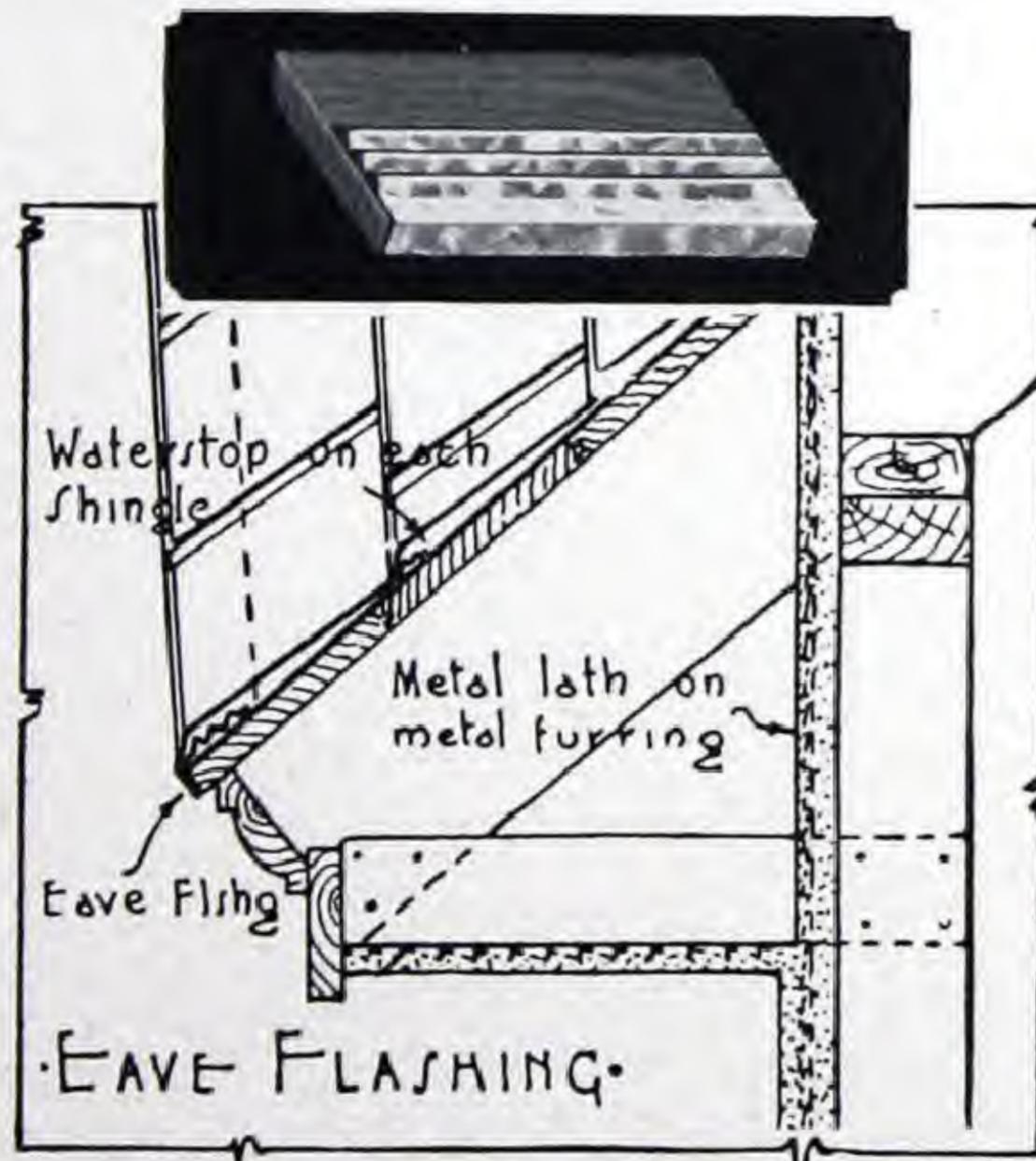


Figure 5

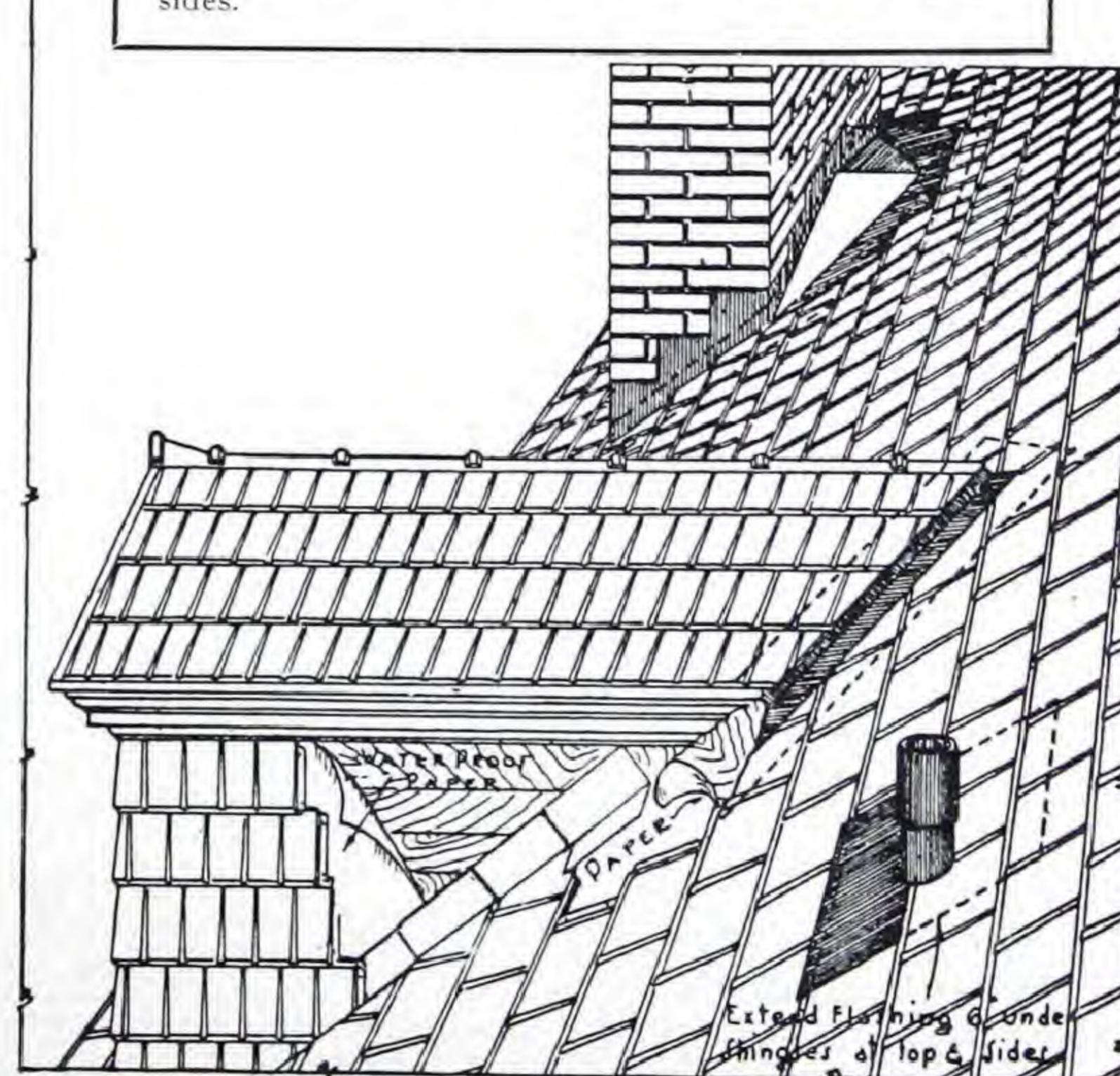


Figure 7

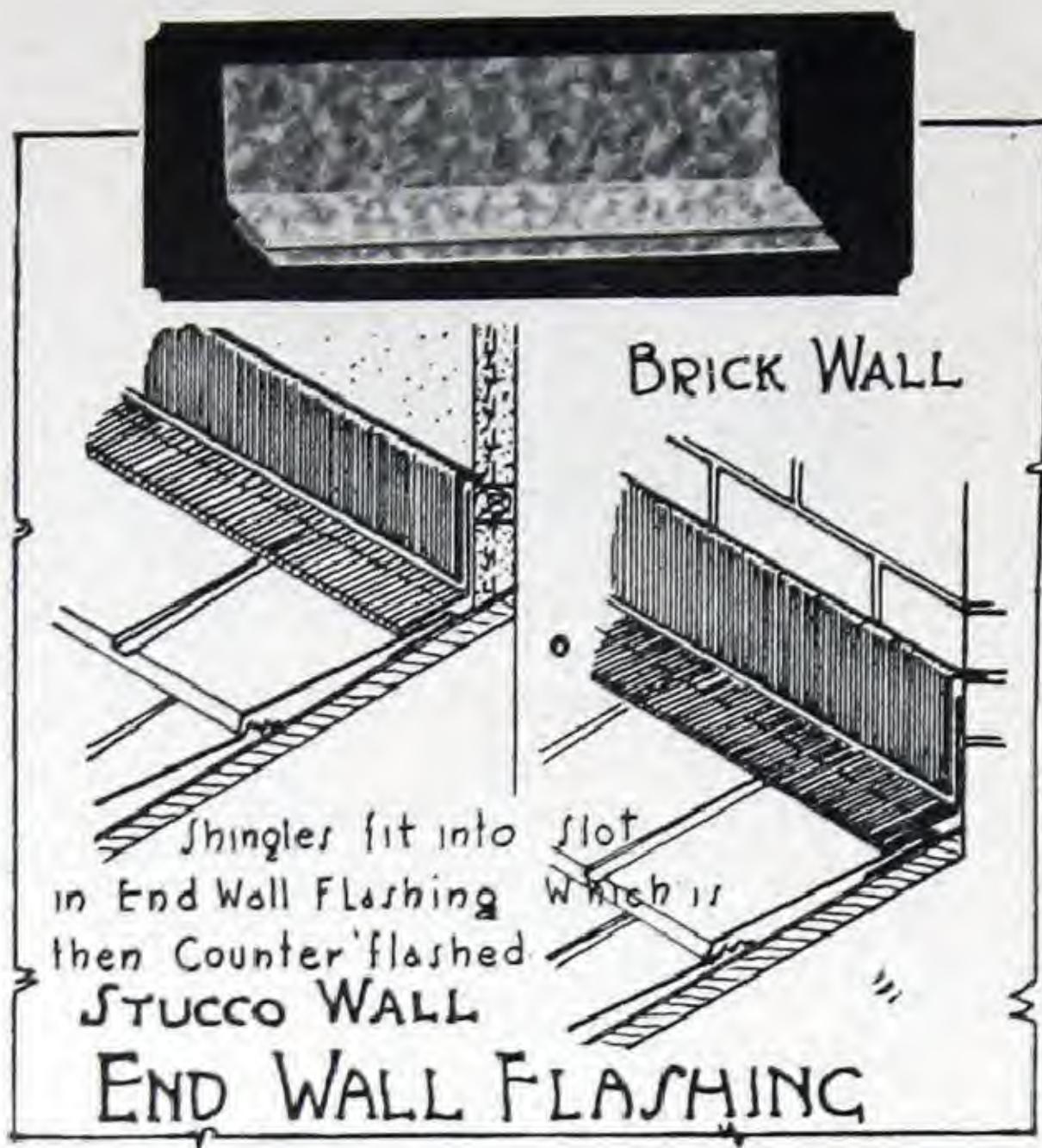


Figure 8

the application of tile is started. This Gable Finish is merely nailed through the flange over end of roof. The left sides of tile are then inserted into the fold of the Finish and the fold is then securely malleted down over the edge of each tile inserted.

At Eave Edge (Figure 5), when using "Titelock" American Tile, Shingles or Slate, Eave Finish No. 154 should be used. It is merely nailed to the eave edge and the bottom edge of the first course of American Tile, Shingles or Slate laps over the four ridges of this Eave Finish just as each unit thereafter locks over the ridges of the preceding course, to prevent water from backing up or blowing in under the roofing. See page 15.

At Valleys (Figure 6), for all types of Milcor "Tite-lock" Roofing, use Formed Valley No. 156, as illustrated on pages 9 and 15, in either 14-inch or 20-inch widths, as required. The 20-inch is more desirable, as it presents a larger surface on each side of the break for the flow of water. This Valley is formed with two folds on each side of the break, the folds being pitched slightly toward the break so as to make the Valley absolutely waterproof after the roofing units are applied. Laying of the Valley is started at the eave end and is run up to the ridge. Each joint must be lapped at least 2 inches and should be well soldered. Nailing should be done only along outer edges of the Valley.

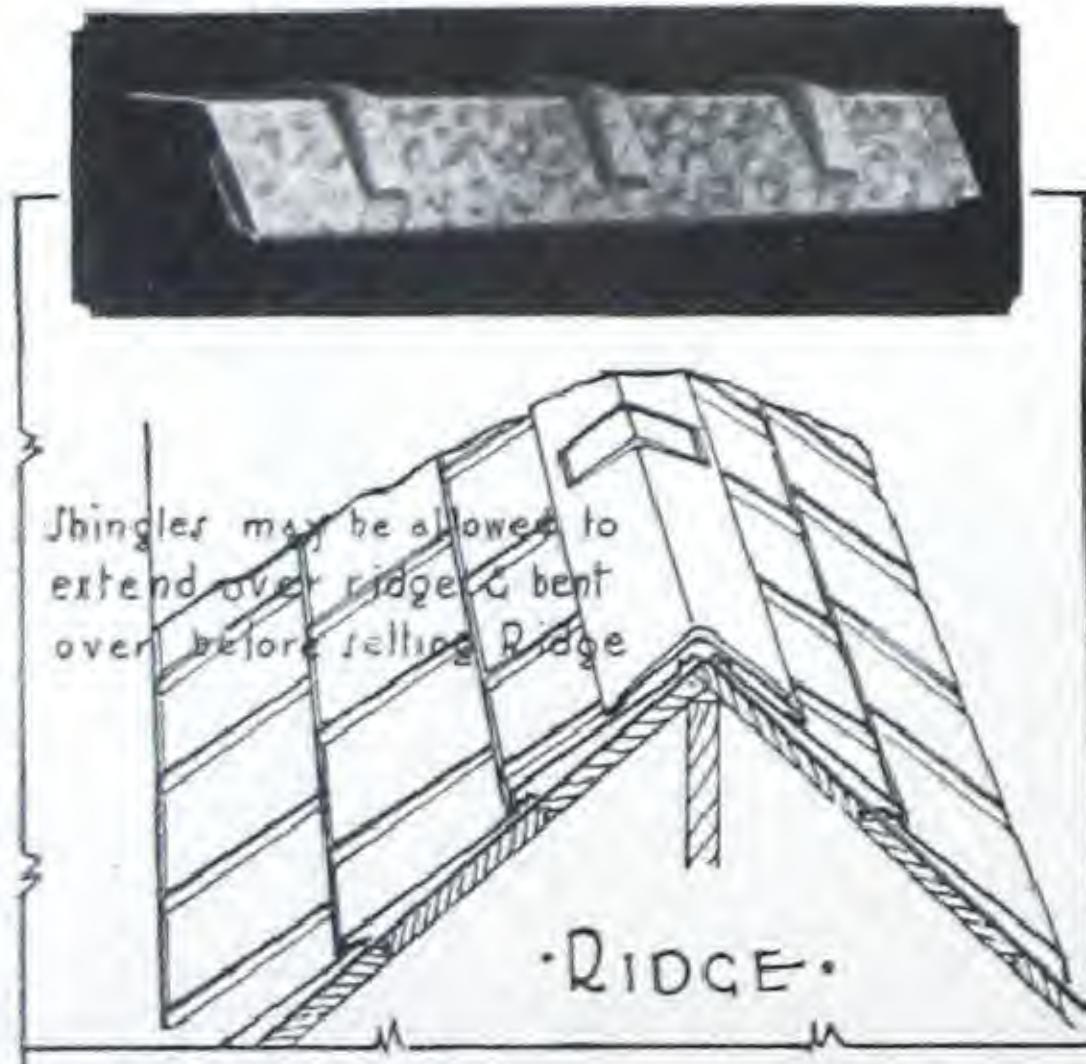


Figure 9

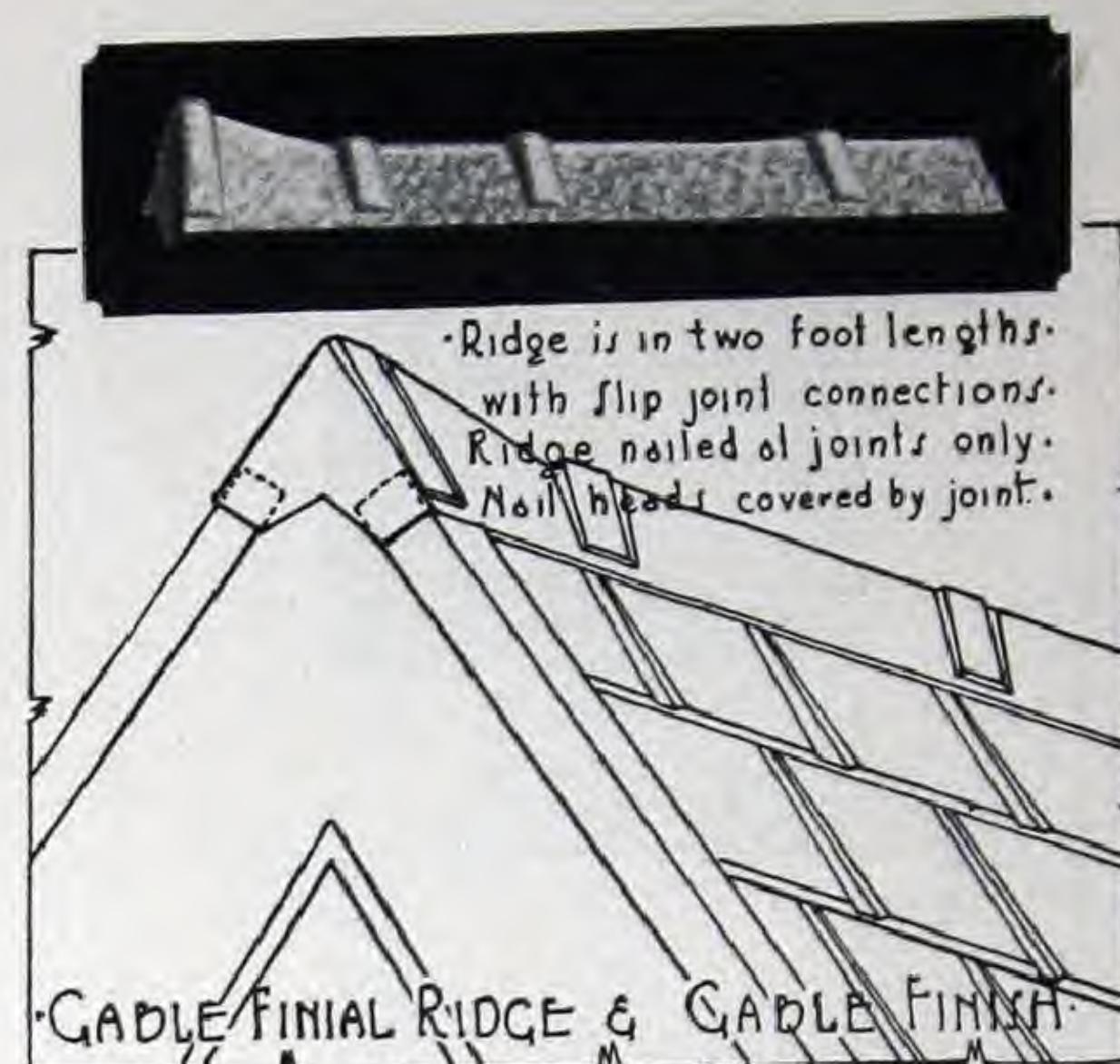


Figure 10

Figure 7 shows how the sides of Dormers, Chimneys, etc., as well as Saddles, are flashed. Notice instructions on the drawing.

Figure 8 shows how No. 161 End Wall Flashing is used wherever the Shingles run dead into a wall, chimney, dormer, etc.

Figure 9 shows how No. 150 Ridge should be applied. Do not apply until the shingles are in place at the right point. The shingles should extend approximately one inch over the ridge and can then be bent to fit over the other side. After this is done in each side of the ridge, No. 150 Ridging should be applied. This ridge finish is in 2-foot lengths and has slip-joint connections, making a neat, attractive and weather-proof finish.

Figure 10 shows Gable Finial No. 151, Ridge No. 150 and Gable End Finish No. 155 in relative position.

Figure 11 shows the application of No. 157 Hip Finish, with regular Hip Finial and No. 159 Hip Starter. Application of No. 157 Hip Finish should be commenced at the ridge and be worked down to the eave. This is a slip-joint product, thereby covering all nails and making a neat as well as a weather-proof finish at the hip.

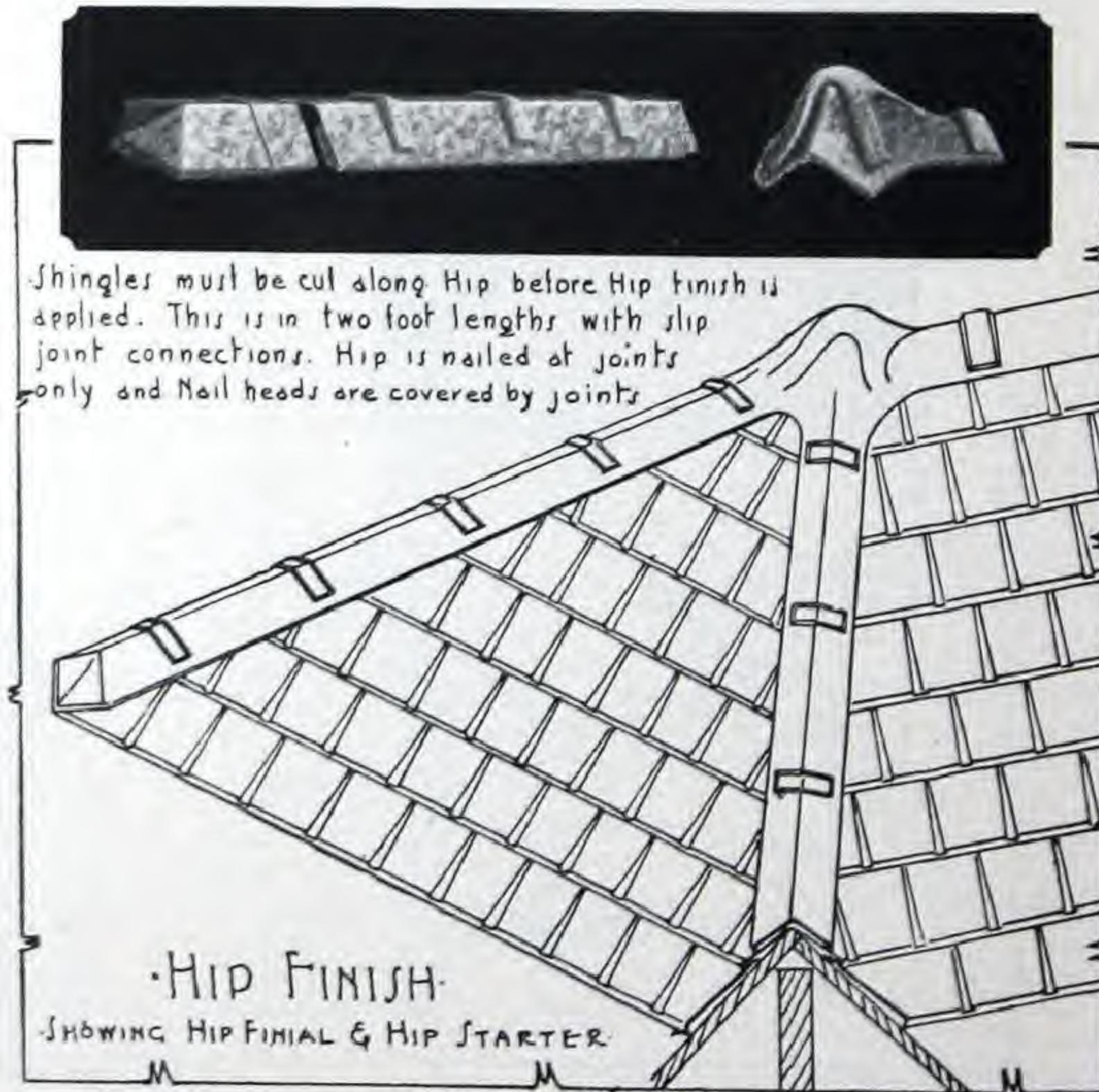


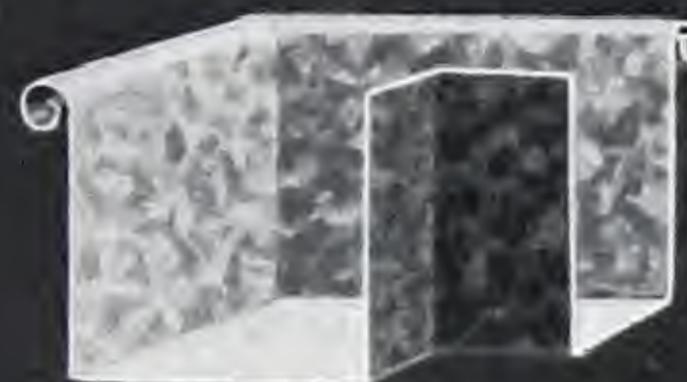
Figure 11

MILCOR

GUTTERS AND MITRES

FURNISHED IN GALVANIZED OPEN
HEARTH STEEL, GALVANIZED COPPERED
OR COLD ROLLED COPPER. CAN
ALSO BE MADE SPECIAL IN ANY
SIZES. STYLE OR GAUGE DESIRED.

STYLE-M-ROOF GUTTER-SIZES 3, 3½, 4½, 6 INCHES



STYLE-F-MITRE



STYLE-F-BOX GUTTER-SIZES 3, 4, 5, 6, 7, 8 INCHES



STYLE-G-MITRE



STYLE-G-OGEE GUTTER-SIZES 3, 3½, 4, 5, 6, 8 INCHES



STYLE-I-MITRE



STYLE-I-OGEE GUTTER-SIZES 3½, 4, 5, 6, 7, 8 INCHES



STYLE-J-MITRE



STYLE-J-OGEE GUTTER-SIZES 3½, 4, 5, 6, 7 INCHES



STYLE-O-MITRE



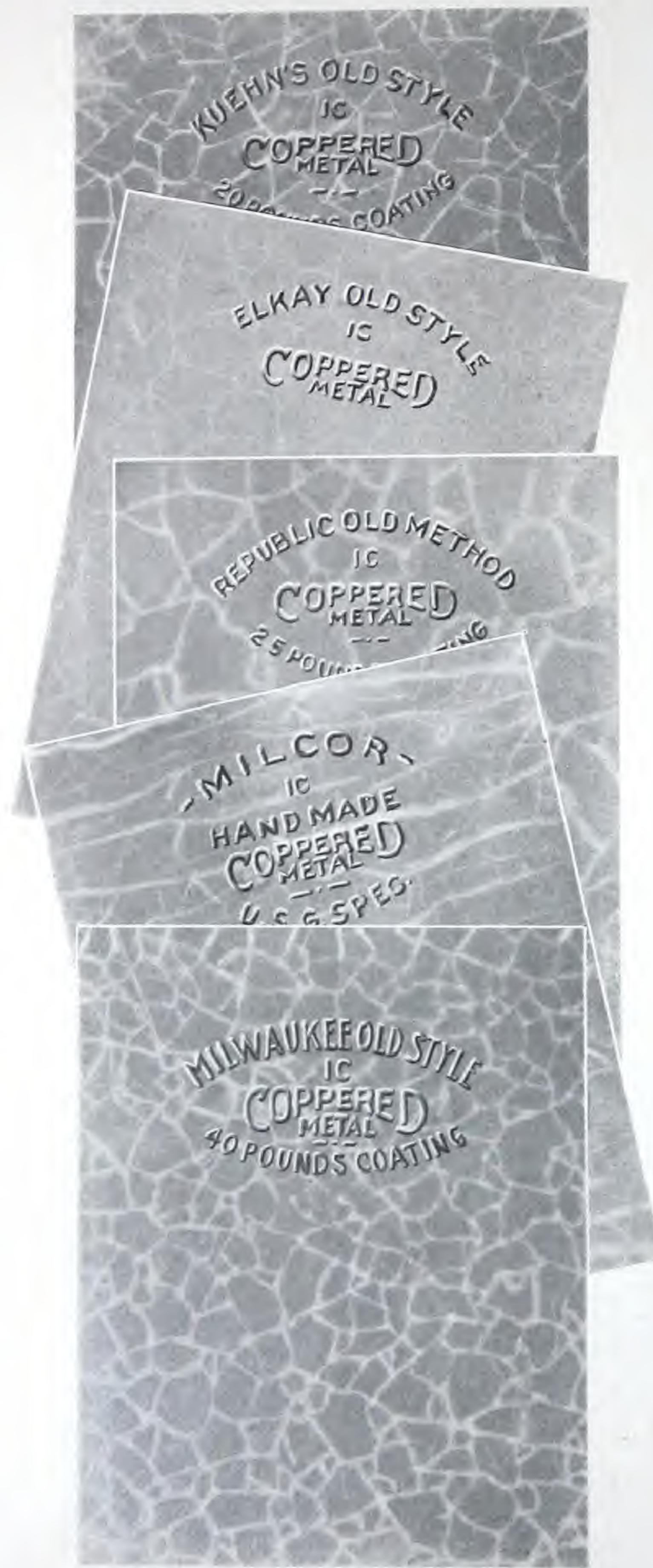
STYLE-O-BOX GUTTER-SIZES 3, 3½, 4, 5, 6 INCHES

MILCOR

CRIMPEDGE GUTTER SLIP JOINT, SINGLE BEAD (ALSO MADE IN LAP JOINT, SINGLE BEAD)
SIZES 3½, 4, 5, 6, INCHES.

Milcor Service is Complete, Including Roofing and the Trimmings, Gutters, Eaves Trough, Conductor Pipe, Cut-offs —
Everything the Roof Requires.

MILCOR, Warranted Terne Plates



ON many types of buildings, especially where the roofs are not visible and are flat or have a pitch of less than one-third, Terne Plate offers ideal, firesafe, permanent protection at low cost. The Milcor line of Terne Plates with our high-grade Coppered Metal base, are the finest material of this type available in the various standard grades. The importance of quality Terne Plate roofs is recognized by Architects, Engineers, and Contractors under circumstances where it is permissible to use this roofing.

How to Construct Reliable Terne Plate Roofs

Roofs with less than one-third pitch are made with flat seams, and should preferably be covered with high-grade ternes, 20 pounds coating or heavier, from sheets 14 x 20 inches dimension rather than from sheets 20 x 28 inches, because the larger number of seams stiffen the surface and help to prevent buckles and rattling in stormy weather. For flat seam roof 1-inch barbed and tinned roofing nails should be used not over 6 inches apart, well under the edge. They should be well covered up and the seams should be pounded down over the edge. Nails must never be exposed.

Steep tin roofs should be made with standing seams, and from sheets 20 x 28 inches, fastened down with cleats, not over 18 inches apart. Drive nails into the cleats only.

While it is always cheapest to use the best material, roofing plates with a lesser coating may be used for steep standing seam roofs. IC roofing plates, in which the iron body weighs about 50 pounds per 100 square feet, are more suitable than IX plates (62½ pounds per 100 square feet), because the seams in the lighter plates will not suffer as much from contraction and expansion as the thicker plates.

with COPPERED METAL Base

The amount of terne coating on the lighter plates should in all cases be fully as heavy as on the heavier plates.

In late years the anxiety of some manufacturers to satisfy the demand of some users for cheap goods has been the cause of many inferior grades being introduced. This latter class of material may suit for some purposes outside of roofing, or for roofs on temporary buildings, but for roofs that are expected to last, the "double dipped" plates should be used.

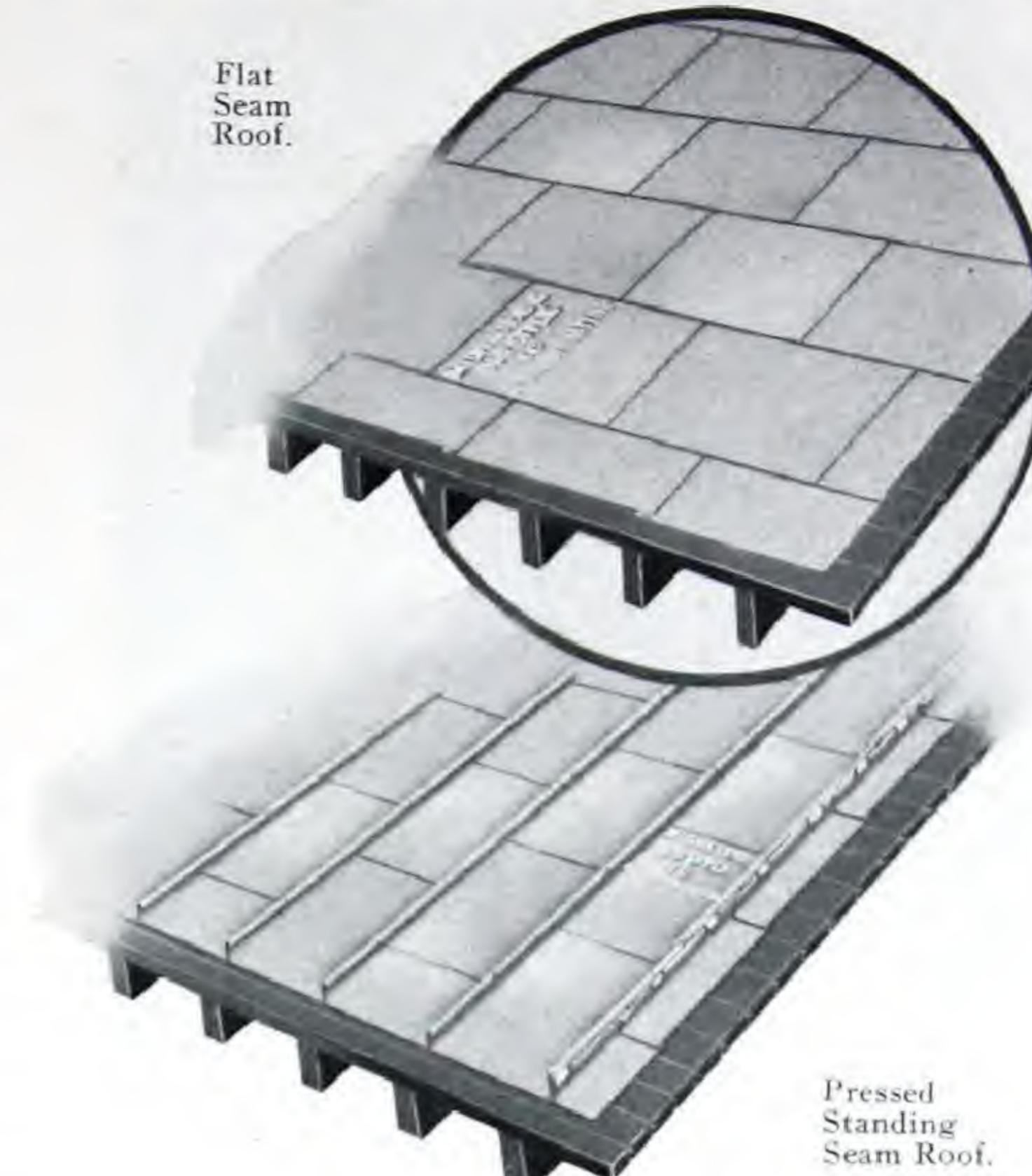
The use of acid in soldering seams in a tin roof is to be carefully avoided; acid coming in contact with the bare iron on the cut edges and corners where the sheets are folded and seamed together will cause rusting. No other soldering flux but good rosin should be used.

Every roof should be carefully cleaned, and all rosin spots and detrimental substances should be removed as the tinner's work is being finished. Lumps of rosin left on the roof will melt in the sun, stick to the roof, cause blisters and prevent paint from adhering.

The sheathing boards underlying the roofing tin should be put close together. The wood should be well seasoned, dry, and all knots should be culled out. It is also advisable to cover the boards with good building paper before the tin is laid on.

When no paper is used the tin must in all cases be painted on the underside with good reliable oil paint before it is laid and fastened on the roof. The outside should receive two coats of paint as soon as roof is finished.

Details of weights and grades of Milcor Terne Plate furnished on request. Estimates, Quantity Surveys and Prices also gladly furnished. Write for samples, sizes, number of sheets per "square" or any other specific information desired for the particular use you have in mind.



Milcor Dependable Quality

The Milcor Method of plating Copper-bearing sheets with a heavy coating of pure tin and *new* lead, mixed in correct proportion, results in the very highest grade Terne Plate — exceptionally strong in its rust resistance and unequalled in durability.

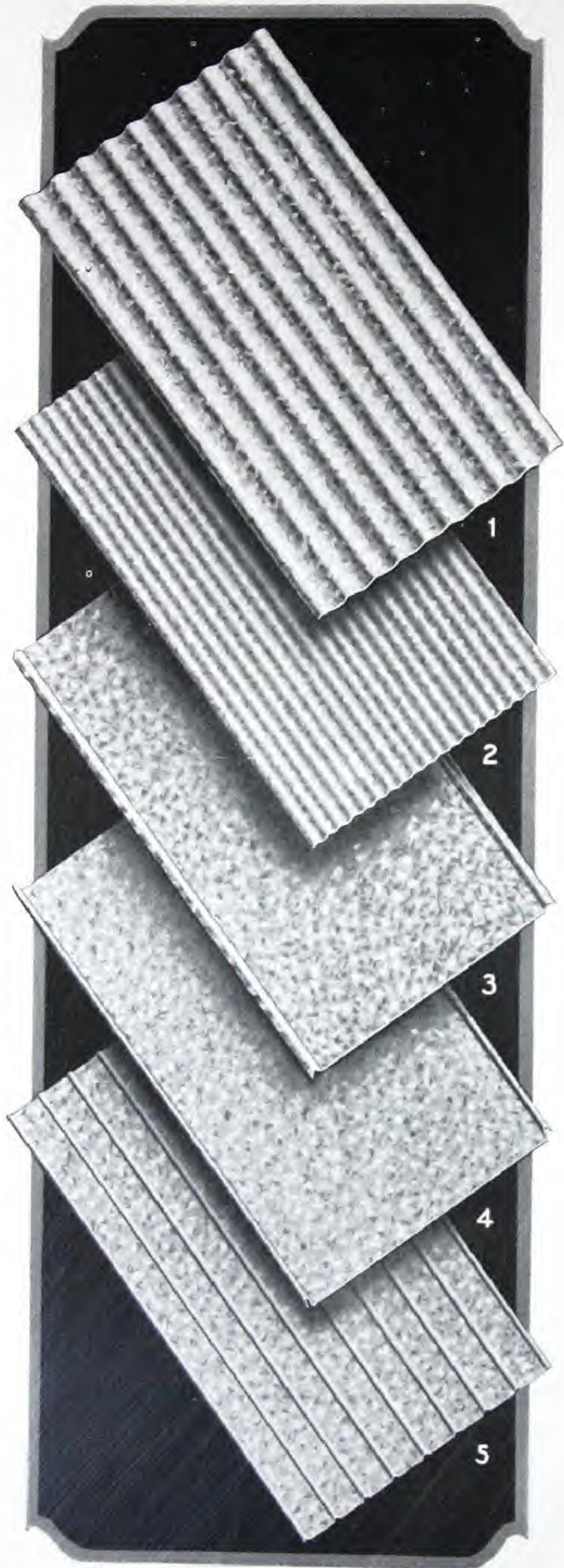
Each plate is carefully, evenly and liberally coated and the sheets are free from pin holes and other defects which are injurious and contribute seriously to deterioration. The most rigid inspection system insures highest standards and uniformity of quality on all Milcor Sheets before packing in crates.

Terne Plate with base of our special Coppered Metal coated by the Milcor process, costs us more, but this ultra quality has been fully appreciated and continues to be, with the result that our volume and repeat business have always justified these manufacturing policies.

Users of Milcor Terne Plate have sound assurance that these sheets will render dependable service under the most severe conditions.

MILCOR

ARCHITECTURAL SHEET METAL



MILCOR Galvanized Sheets

THE uses of Milcor Corrugated and Flat Open-Hearth Sheets, Black or Galvanized, are many and varied. For every purpose, they are the most desirable sheets available — they are extra soft and ductile, easily workable, produced by the finest, most up-to-date equipment and processes which insure uniform quality and exact lengths and widths.

Milcor Galvanized Open-Hearth Sheets are tightly coated with prime spelter. Experienced men who have specialized in this work for many years — men who have devoted practically all their lives to this industry — guide every operation, to insure highest quality. There can be no slighting of any detail in the production of Milcor Galvanized Sheets.

These sheets are used extensively as roofing for buildings of every description. Detailed instructions will be cheerfully furnished to aid mechanics in the most efficient application of the various types of Milcor Sheet Metal Roofing. Frequently when the contractor does not possess proper tools and does not specialize on this type of work sufficiently to warrant the purchase of such equipment, we loan the correct tools for the job. These tools may also be purchased at a very reasonable price from us or from any of our Distributors.

Whether the roof is flat or is sloping at any angle, there is a correct type of Milcor Sheet or Roll Roofing available for imme-

Speedy Service.





diate delivery from our enormous stocks, in any gauges desired and in any standard sizes. Our equipment for producing special sheets is also unequalled. Our loading facilities, with special railway sidings at our main factories and all branches, help speed up Milcor service.

As mentioned above, the uses of Milcor sheets are varied. Ventilating systems, for instance, in skyscrapers, industrial plants, farm buildings, public buildings, schools, hospitals, hotels, institutions, etc., require the sort of quality embodied in Milcor Sheets. Wherever sheet metal is required, Milcor solves the problem. The importance of insuring proper quality sheets is grave enough to demand definite specification of Milcor Brands.

COPPERED METAL

Our Galvanized Coppered Metal Sheets are particularly durable and are being specified extensively for every purpose, where ultra-extreme service is desired.

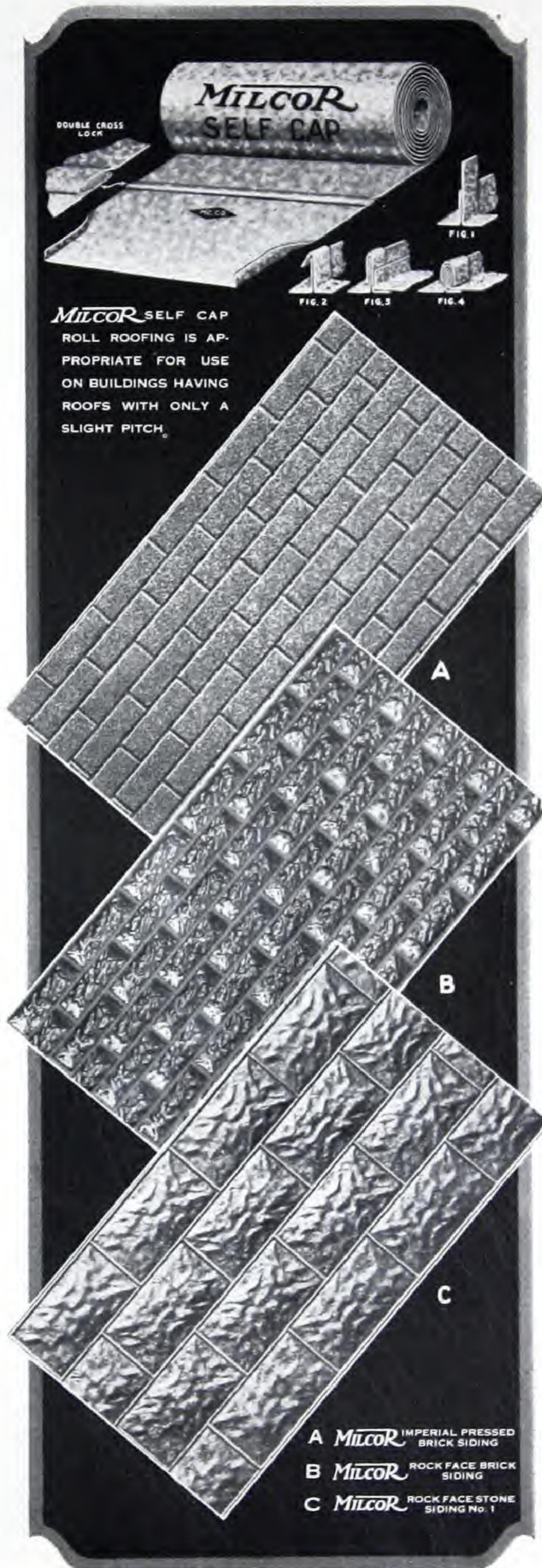
Complete details on all types of Milcor Sheets and Milcor Roll Roofing will be gladly furnished on request.

The types illustrated here are as follows: On page 22, No. 1, 2½-inch Corrugated Sheets; No. 2, Special 1¼-inch Corrugated Sheets; No. 3, 2-V Crimp Roofing; No. 4, Pressed Standing Seam Roofing; No. 5, Plain Beaded Siding or Ceiling—all furnished in Milcor Open-Hearth Steel or Coppered Metal, Galvanized or Painted. On page 23, the types shown are as follows: Milcor Self Cap Roll Roofing; "A", Imperial Pressed-Brick Siding; "B", Rock-Face Brick Siding; "C", Rock-Face Stone Siding No. 1—all furnished in Milcor Open-Hearth Steel or Coppered Metal, Galvanized or Painted.

Ideal Loading Facilities.



23



MILCOR

Alpina Ventilators

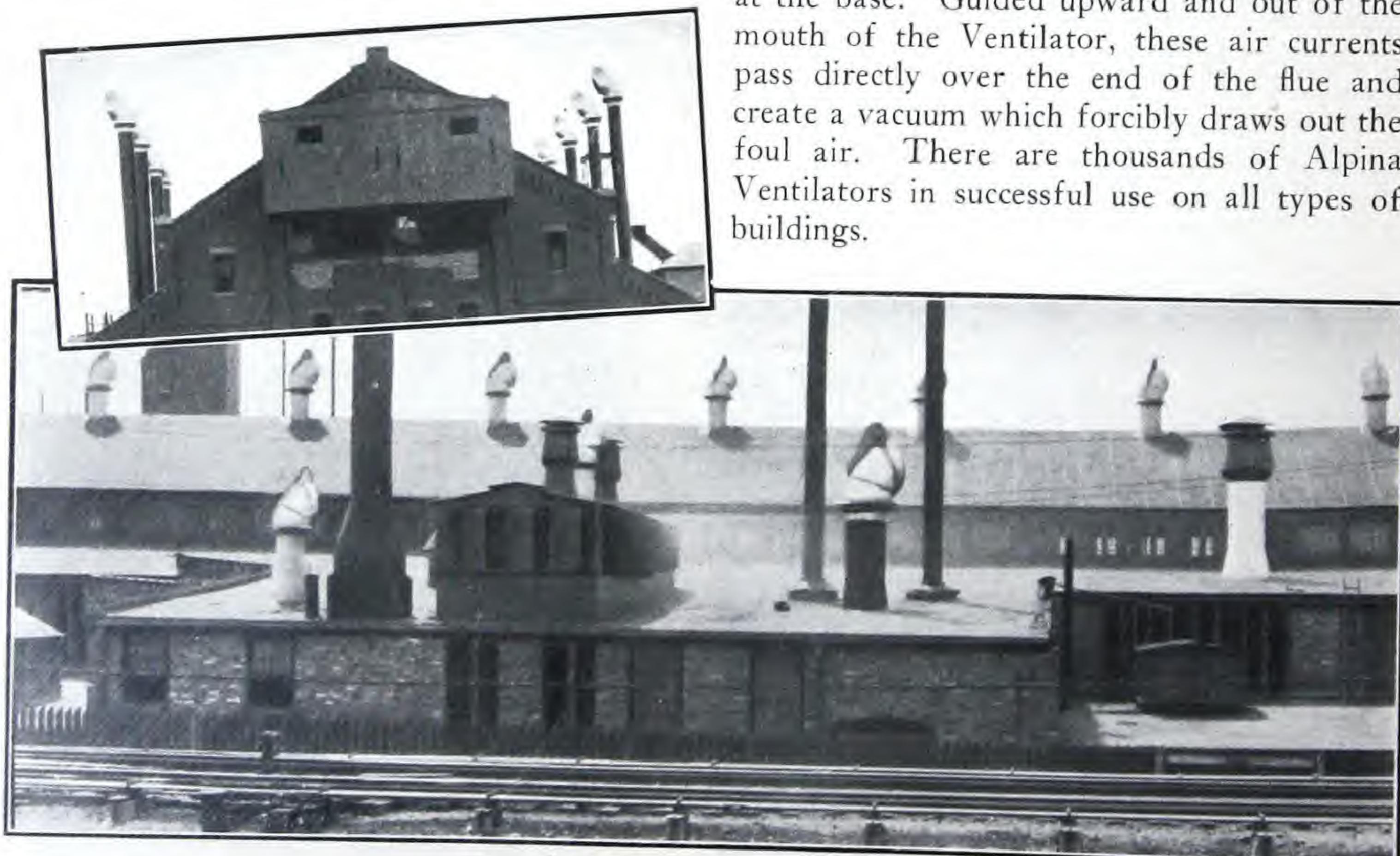


IN the Milcor Alpina Ventilator, the entire capacity of the flue is utilized for the expulsion of foul air, the cap or upper portion of the ventilator being three-fifths larger than the flue.

The remarkable efficiency of the Alpina lies in its sensitiveness and obedience to air currents. The revolving part of this Ventilator runs on brass ball-bearings which are

completely encased and weather-protected. Surmounting this revolving section is a broad vane. The slightest air movement against this vane turns the mouth of the Alpina to the leeward of the wind, thus preventing any possibility of back draught.

The syphonating power of the Alpina Ventilator is produced by the rush of exterior air currents entering between the flaring aprons at the base. Guided upward and out of the mouth of the Ventilator, these air currents pass directly over the end of the flue and create a vacuum which forcibly draws out the foul air. There are thousands of Alpina Ventilators in successful use on all types of buildings.





Patented Oct. 21, 1913.



Efficiency Built-In

The Alpina is ruggedly built, rigidly braced throughout to keep it from getting out of true—braces on each side of the vane; rod reinforcement around mouth of exhaust; brace riveted at back of vent and a seamless tube reinforcement which holds vent in place as it revolves on its bearings. Another brace provides additional stability and free swing of upper section. The non-rustable, fully encased ball-race is firmly braced; the perpendicular shaft rests securely on a crossbar which is also braced.

Mechanical Specifications and Capacities:

Catalog Size	Area Square Required	Round Diameter	Height	Cubic Feet per Hour Wind at 5 Miles per Hour	Shipping Weight
12	20"	12"	10½"	16,500	25 lbs.
14	22"	14"	12"	22,200	30 lbs.
16	24"	16"	14"	29,400	40 lbs.
18	28"	18"	17"	39,000	50 lbs.
20	30"	20"	18"	48,000	60 lbs.
24	36"	24"	20"	66,000	70 lbs.
30	40"	30"	23"	102,000	100 lbs.
36	52"	36"	24"	153,000	125 lbs.

Furnished in Pure Copper, Galvanized Open-Hearth Steel or Galvanized Coppered Metal. On galvanized grades, all braces are galvanized after formation.

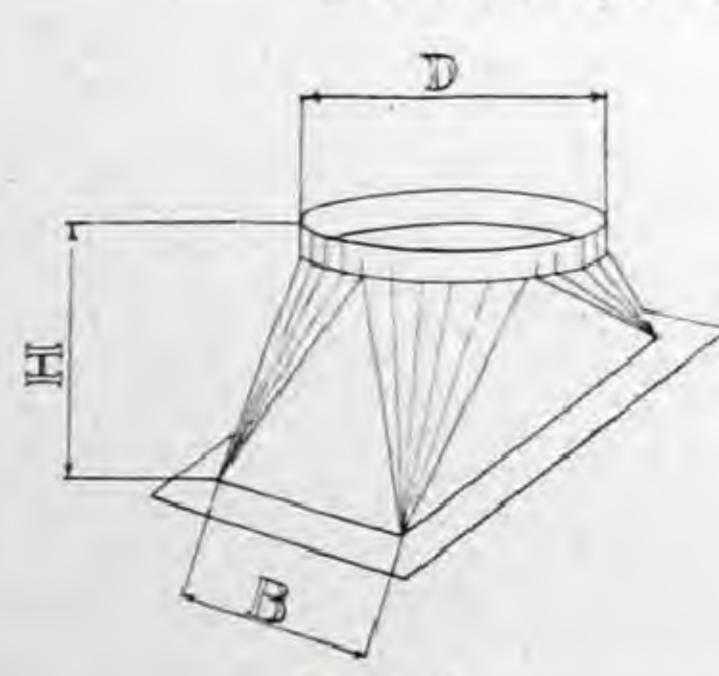
A Testimonial

We have a battery of ten heat-treat furnaces in this department and previous to the installation of Alpina Ventilators, it was nearly impossible for us to keep men on this job, due to the fact that these furnaces at times give off excessive amounts of smoke and gas. We are pleased to say that since the installation of the Ventilators has been made, we have not had a single complaint in this department from this cause.

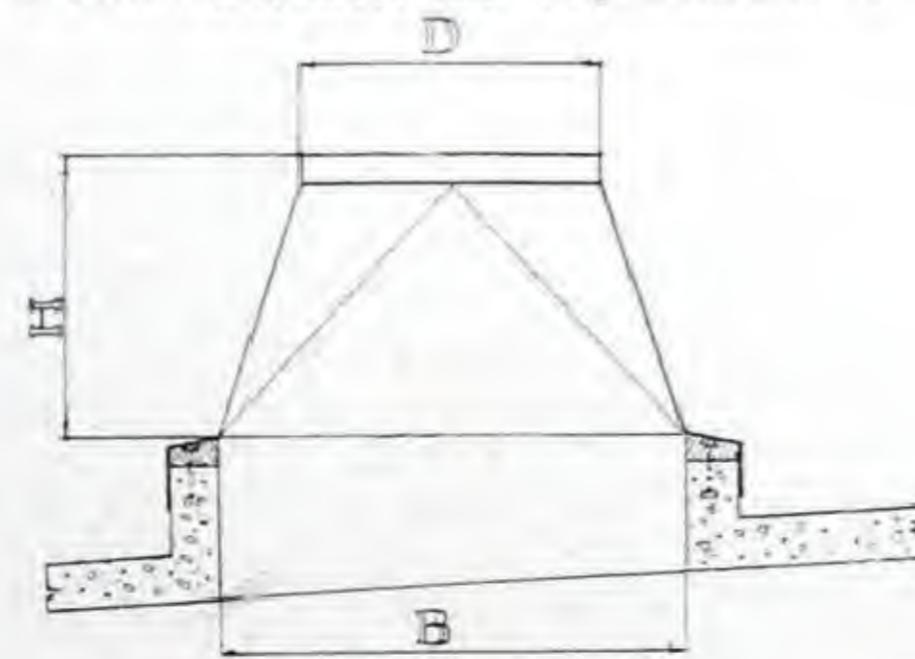
Very truly yours,

LADISH DROP FORGE COMPANY,
Cudahy, Wisconsin.

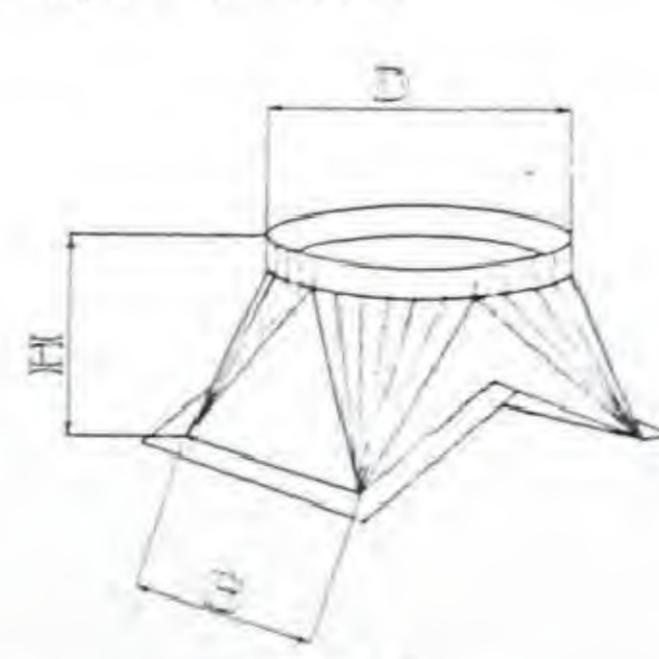
The three styles of bases shown here, meet the requirements of various styles of roofs.



Style A



Style B



Style C

For Slanting or Saw-Tooth Roof.

For Ordinary Peak Roof, Slanting Both Ways.

For Installation on Concrete Roof.

MILCOR
VENTILATORS
IN SERVICE

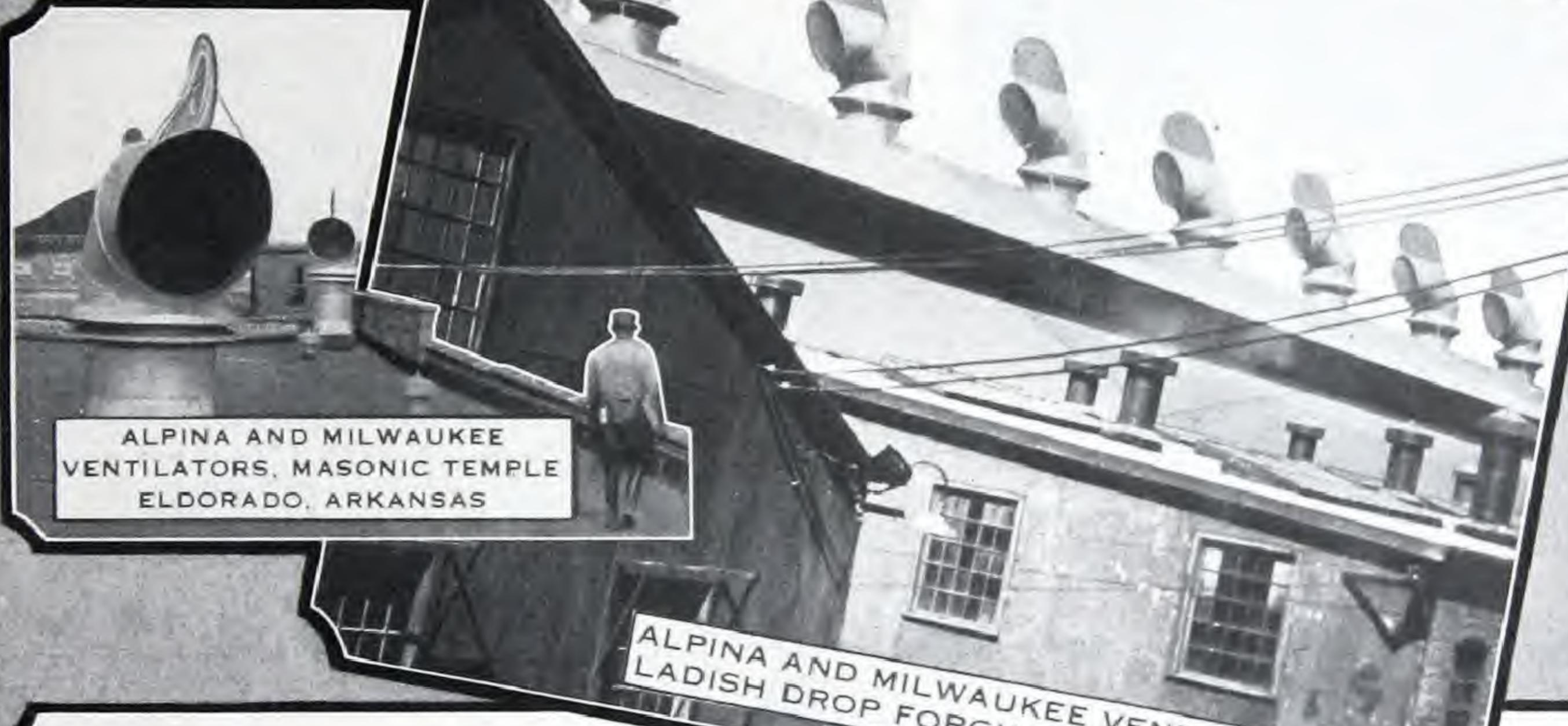
ALPINA VENTILATORS ON BUILDINGS
AT NASH MOTORS COMPANY
KENOSHA, WISCONSIN

ALPINA VENTILATORS ON RITCHIE GROCERY CO.
ELDORADO, ARKANSAS

ALPINA VENTILATORS AT MONTREAL MINE, IRONWOOD, MICHIGAN



MILWAUKEE VENTILATORS
ON SCHOOL AT
CLINTON, WIS.

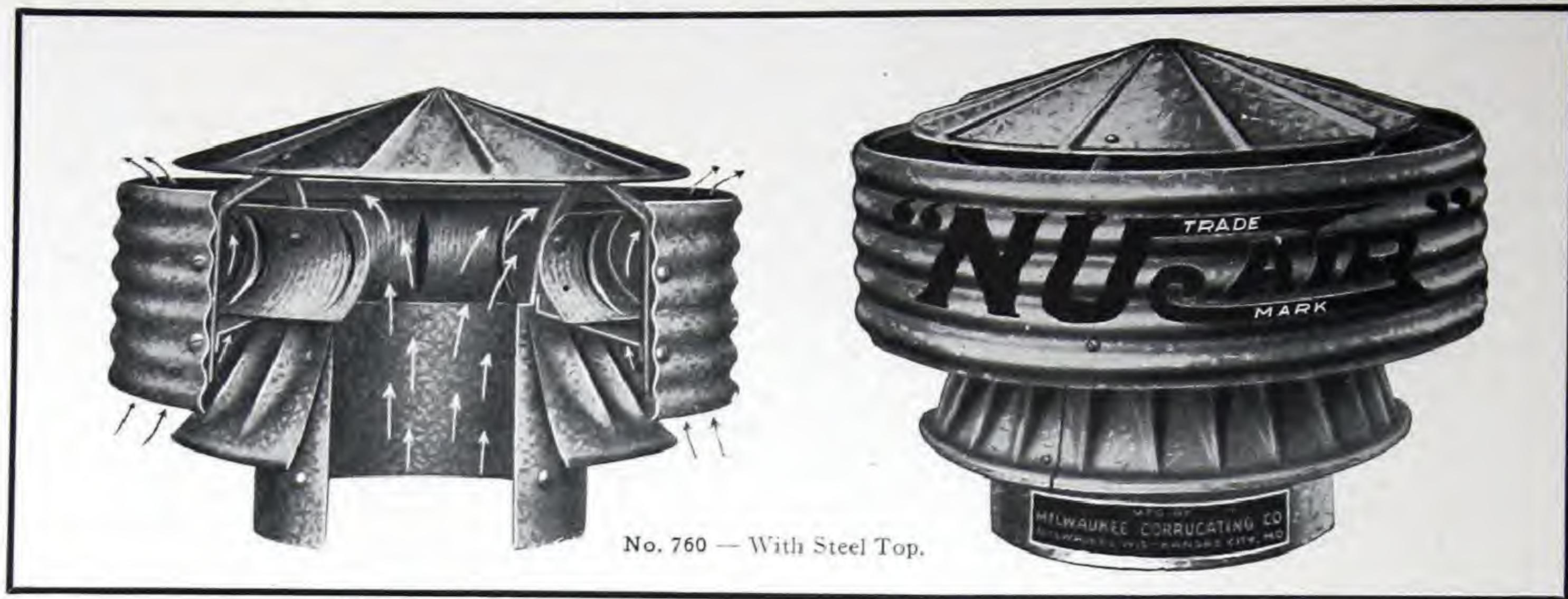


ALPINA AND MILWAUKEE
VENTILATORS, MASONIC TEMPLE
ELDORADO, ARKANSAS

ALPINA AND MILWAUKEE VENTILATORS ON
LADISH DROP FORGING CO., CUDAHY, WIS.



ALPINA AND NUAIR VENTILATORS ON FLOYDADA (TEXAS) HIGH SCHOOL



No. 761 — With Wired Glass Top.

No. 762
With
Base.



“Nu-Air” Ventilators

MILCOR Nu-Air Stationary Ventilators possess great exhaust capacity and strength. The sloping dome keeps out rain, snow and sleet. The corrugated weather-band adds to the strength and rigidity of Nu-Air and affords additional vacuum-creating power.

Outer air currents rush in between the weather band and the curved deflector. Acting at an angle of 45%, these currents travel upward and outward, thus impelling a constant discharge of impure air through the ventilating shaft. Constant circulation of fresh air ensues.

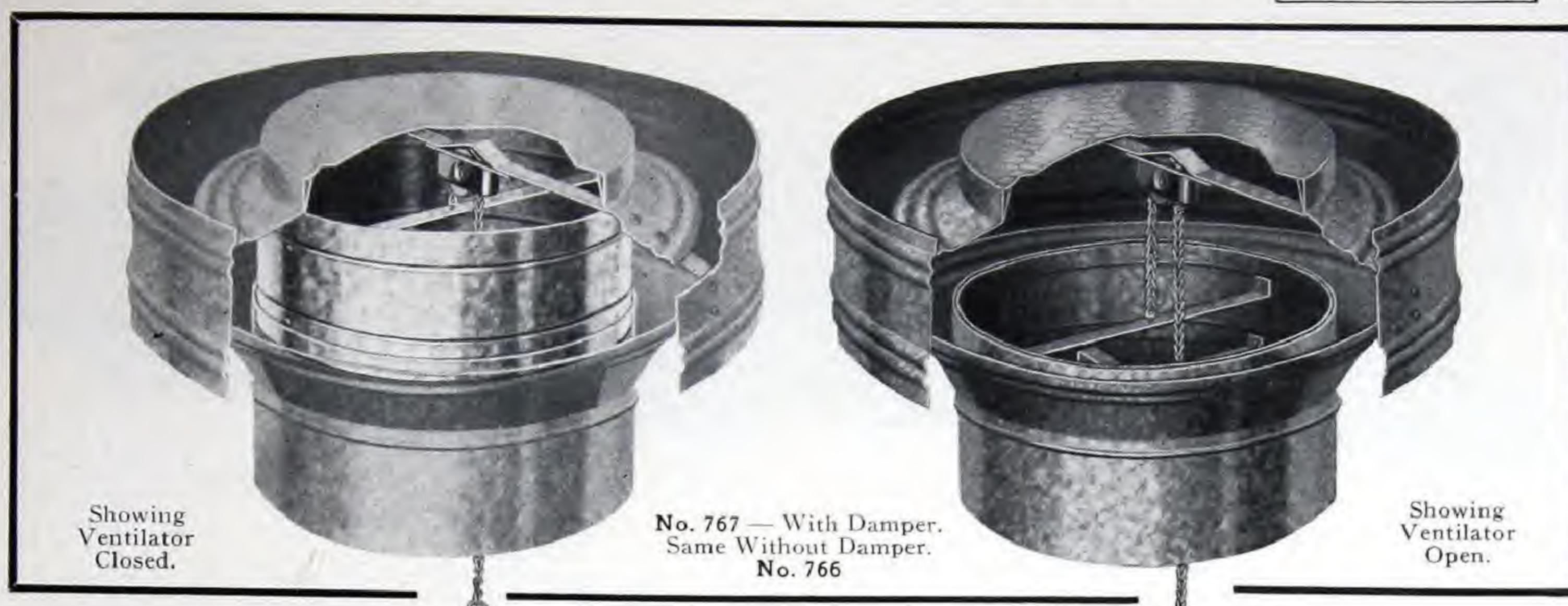
Sizes, Weights and Capacities:

(Capacities Indicate Cubic Ft. of Air Discharged Per Minute — Wind Vel. 5 Miles per Hr.)

		10"	12"	14"	16"	18"	20"	24"	30"	36"	48"
No. 760	Weight (lbs.)	15	20	25	40	45	55	80	120	175	250
	Capacity	250	365	495	650	810	1000	1450	2250	3500	6000
No. 761		(Same Weights and Capacities as No. 760)									
No. 762	Weight	35	40	55	80	85	100	130	190	250	400
		(Same Capacities as No. 760)									

Furnished in Pure Copper, Galvanized Open Hearth Steel or Galvanized Coppered Metal. All Braces on galvanized grades are galvanized after formed.





"Milwaukee Ventilators"

THE "Milwaukee" Stationary Ventilator, although simple in construction, is very efficient in its ventilating capacity. It requires no attention whatsoever. It is well made and extremely sturdy. The weatherband is beaded, top and bottom, to add to its rigidity.

Sizes, Weights and Capacities:

(Cubic Feet of Air Discharged per Minute—Wind Vel. 5 Miles per Hr.)

No.	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	40"	48"	60"	72"
765 Wt. (lbs.)	10	12	18	22	35	40	45	70	100	155	200	220	350	450
Capacity	130	140	160	250	388	500	625	900	1375	2000	2450	3500	6700	10690

No. 766 (Weights and Capacities same as No. 765)

No. 767 (Weights and Capacities same as No. 765)

Furnished in Pure Copper, Galvanized Open Hearth Steel or Galvanized Coppered Metal. All Braces on galvanized grades are galvanized after formed.

The No. 767 Milwaukee Ventilator, as shown above, is made with Glass Top and Regulating Damper, which is operated by a chain running over a ball-bearing pulley. This damper closes by gravity and opens the ventilating shaft. Pulling the chain draws up the damper and closes the air shaft, partially or entirely at will, without shutting out any light.

No. 766 is the same as No. 767, except that No. 766 is not equipped with the Regulating Damper.

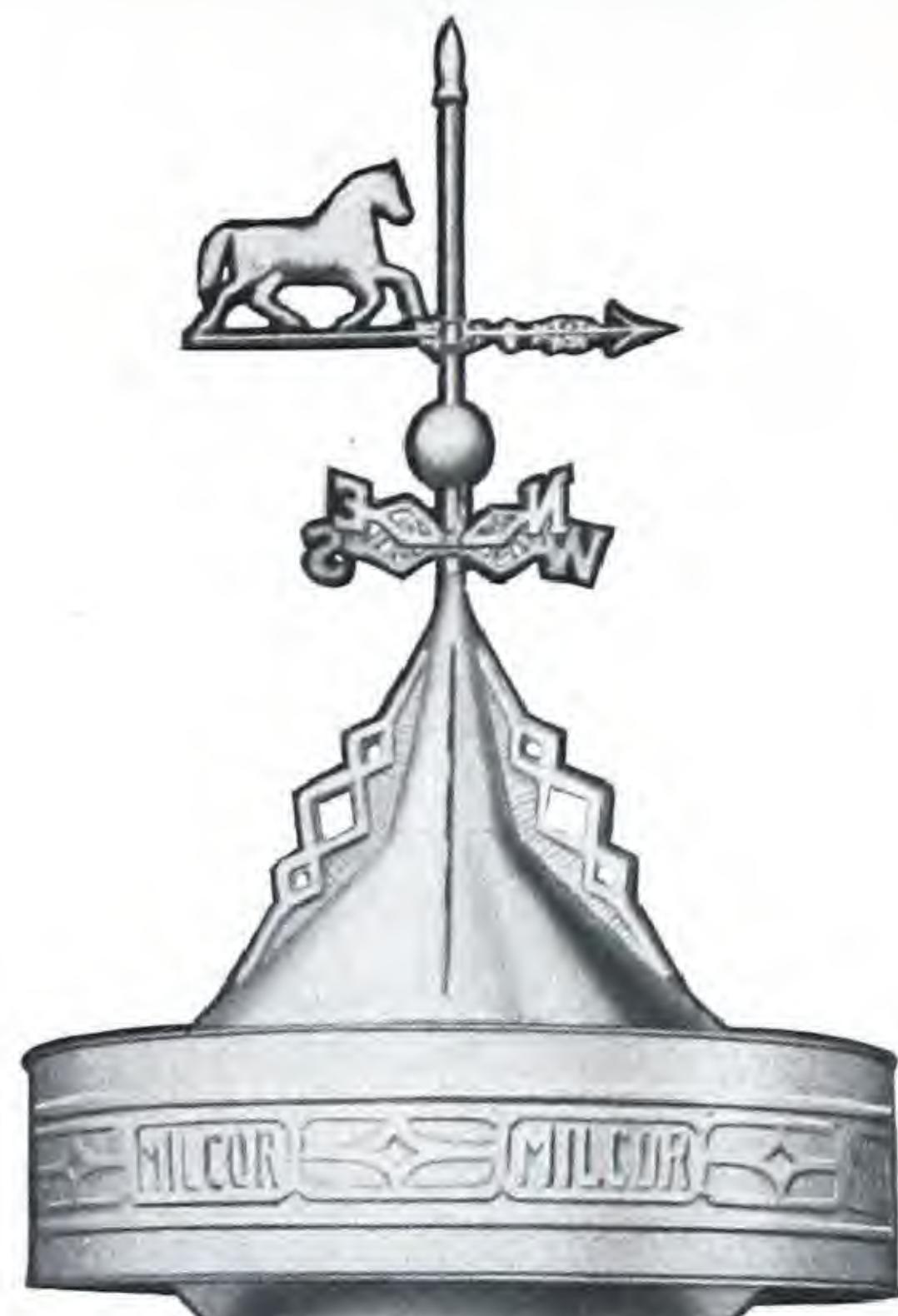


No. 765
With
Steel Top.





Ben Thelan's Farm,
Caledonia, Wis.



MILCOR Barn Ventilators

ATMOSPHERE of barns, stock buildings, creameries, dairies, etc., moisture-laden and heavy, demands a special type of ventilation. The "New Milcor" Ventilator was designed to meet the unusual requirements of such buildings. Thousands of these Ventilators have been demonstrating for years their efficiency on buildings of these types, especially in the leading dairy sections of the country where ventilation of stock barns, creameries and similar buildings is handled in the most scientific manner.

The New Milcor Ventilator is designed so that it can be used either with or without a complete ventilating system. Complete details for installation of adequate ventilating systems for various





buildings will be gladly furnished by our engineers, without cost or obligation, upon receipt of plans or blue prints of the building in question.

The mechanical superiority of the New Milcor Ventilator is indisputable.

The all steel base is an important feature — no wood whatsoever is used in these Ventilators. They are made from Prime Open-Hearth Steel, full weight. Full dimensions as advertised. All angle parts used are *Galvanized after formed*. Heavy brass rivets are used throughout. The tapered steel base is designed on a line with the balance of the Ventilator, giving it perfect symmetry. Each Milcor Ventilator is equipped with Cardinal Points (North, South, East and West).

An extra heavy wind band is used, reinforced with $\frac{1}{4}$ -inch galvanized rod around edges. The galvanized conical-shaped steel "roof" is rainproof and snowproof, properly pitched for perfect ventilation. Galvanized wire screen makes this Ventilator bird-proof.

Edges of base are turned under, making three thicknesses of heavy galvanized steel, to insure great strength where most needed. Crimped metal corners also add strength. The flared metal base, stamped with shingle design, increases rigidity and contributes to the good appearance of the Milcor Ventilator.

Always prepared with brand new coat of Satin Aluminum Paint before shipping. Crated carefully.

In every detail, here is an unusually high-grade ventilator.

See table on next page for number required on various sizes of buildings.

Dimensions and Weights:

No.	Flue	Base Molding	Actual Base	Weight
100	13"	24 x 24"	27 x 27"	100 lbs.
150	16"	28 x 28"	32 x 32"	125 lbs.
200	20"	35 x 35"	39 x 39"	150 lbs.
300	24"	42 x 42"	46 x 46"	200 lbs.
350	28"	47 x 47"	50 x 50"	250 lbs.
400	30"	52 x 52"	54 x 54"	275 lbs.
500	36"	62 x 62"	63 x 63"	300 lbs.

Lightning Rod Attachment at slight extra charge.



Milcor Ventilators on Barn at the Muse Farm, Libertyville, Illinois.



Proper ventilation for various sizes of barns is assured by following this table:

Size of Barn — Length	Size and Number of Ventilators Required
40 to 50 feet	One No. 350
60 to 70 feet	Two No. 350
80 to 100 feet	Three No. 350 or Three No. 400
110 to 130 feet	Four No. 400
140 to 160 feet	Five No. 400

The "Milcor" Ventilator is made in three sizes, without base, for silos, as follows:

- No. 16, with 16-inch flue, weighing 65 lbs.
No. 20, with 20-inch flue, weighing 80 lbs.
No. 24, with 24-inch flue, weighing 125 lbs.

The same style of "Milcor" Ventilator that was designed for barns can be used for Hog and Poultry House ventilation, without base.

The extra flaring base, which affords ample room for hay track when installed on barns, can be eliminated when used for hog and poultry houses.

Made in four sizes, as follows:

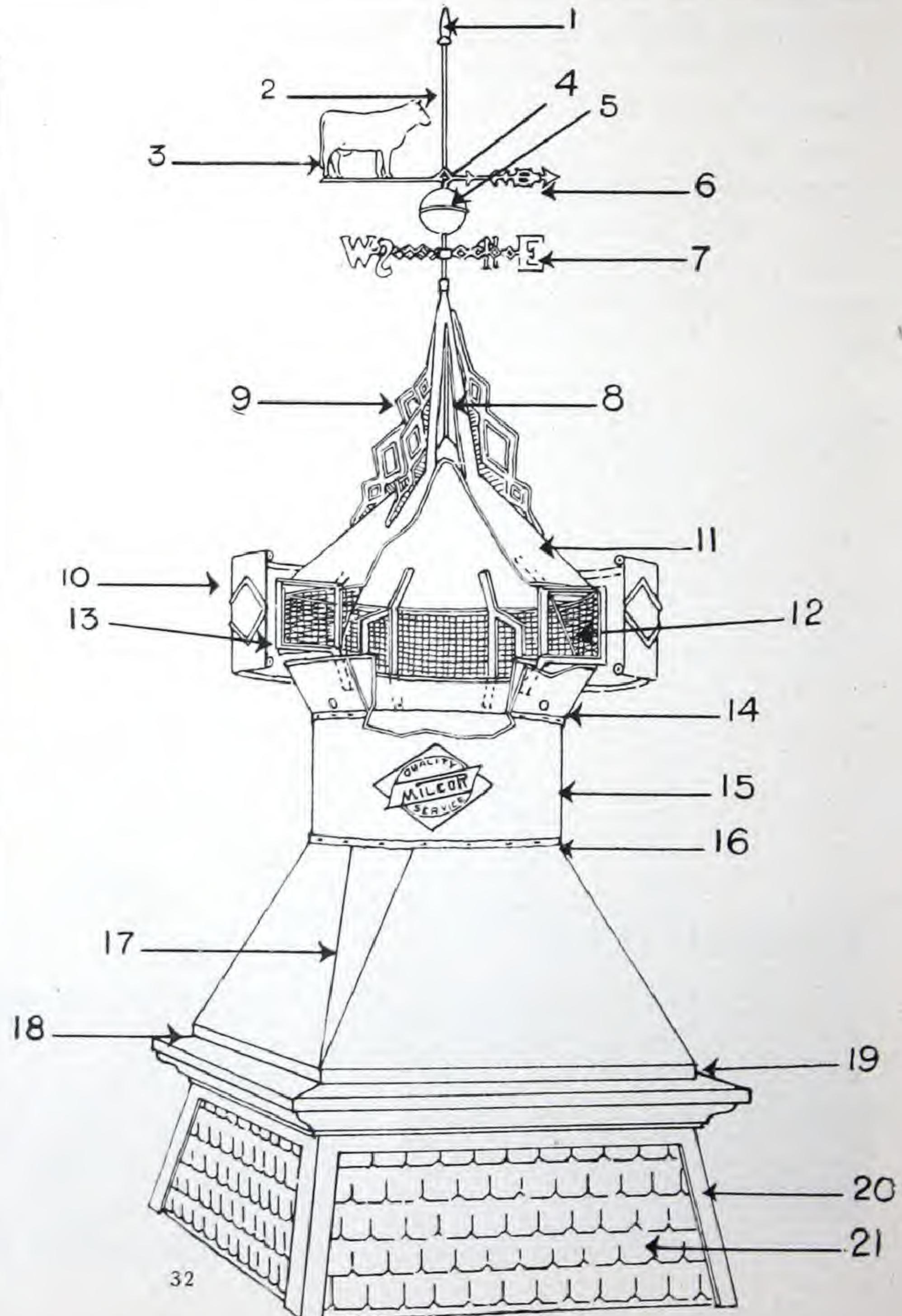
- No. 100-T — 13-inch flue, weight, 60 lbs.
No. 150-T — 16-inch flue, weight, 75 lbs.
No. 200-T — 20-inch flue, weight, 90 lbs.
No. 300-T — 24-inch flue, weight, 140 lbs.

Details of Construction of "New Milcor" Ventilator

1. Heavy Ornamental Cone, removable to permit use of different style of vane.
2. Heavy Galvanized Pipe extending into cone, insuring solidity.
3. Full-Bodied, Stamped Vane with Satin Aluminum finish. Will not tarnish.
4. Galvanized Malleable Ring. Cannot become "ice-bound."
5. Ornamental Zinc Ball. Cannot break or deteriorate.
6. Arrow, Satin Aluminum finished and weighted to balance animal vane. Responds to slightest breeze.
7. Malleable Iron Compass Points.
8. Galvanized Cone. Bracing No. 2.
9. Four Heavy Galvanized Steel Braces strengthen vane rod and add to beauty.
10. Extra Heavy Ornamental Wind Band, reinforced with $\frac{1}{4}$ -inch galvanized rod in edges.
11. Conical Galvanized Steel Roof, Rain and snowproof, properly pitched for perfect ventilation.
12. Galvanized Wire Screen makes ventilator "birdproof."
13. Heavy Wrought Iron Braces, galvanized after formation.
14. Steel Flange adds to ventilating efficiency.
15. Smooth Round Flue.
16. Copper Rivets insure rustproof connection.
17. Flaring Body, of two pieces heavy galvanized steel. Corners closely riveted, insuring stiff, solid construction.
18. Galvanized Bolts to fasten Ventilator to base.
19. Turned Under Edges (three thicknesses of heavy galvanized steel) insure giant strength exactly where required.
20. Crimped Material strengthens corners.
21. Flare Base, stamped with shingle design, which adds rigidity and artistic effect.

Note the ornamental molding surmounting the flare base, which gives a finished artistic appearance to the ventilator.

Prints of the Milcor Barn Ventilator, drawn to $\frac{1}{4}$ or $\frac{1}{8}$ -inch scale, will be furnished for architects who desire to use them in draughts of barn plans. They can be placed under your tracing paper, or cloth for tracing into your plans without the customary preliminary measurements and figuring.





MILCOR "Puttyless" and Puttied Skylights

MIILCOR "Puttyless" Skylights represent a distinct step forward in skylight construction. Because of the unique design of the metal units of the "Puttyless" line, the glass is held securely in place, permanently leak proof, without the use of any putty.

Putting glass into ordinary skylights requires skill and the time and labor required to accomplish a proper installation is a considerable item. This wasted time and expense is avoided with Milcor "Puttyless" Skylights.

Replacement of Milcor uniform glass units is a very simple task on "Puttyless" Skylights. Anyone can do it in a few minutes.

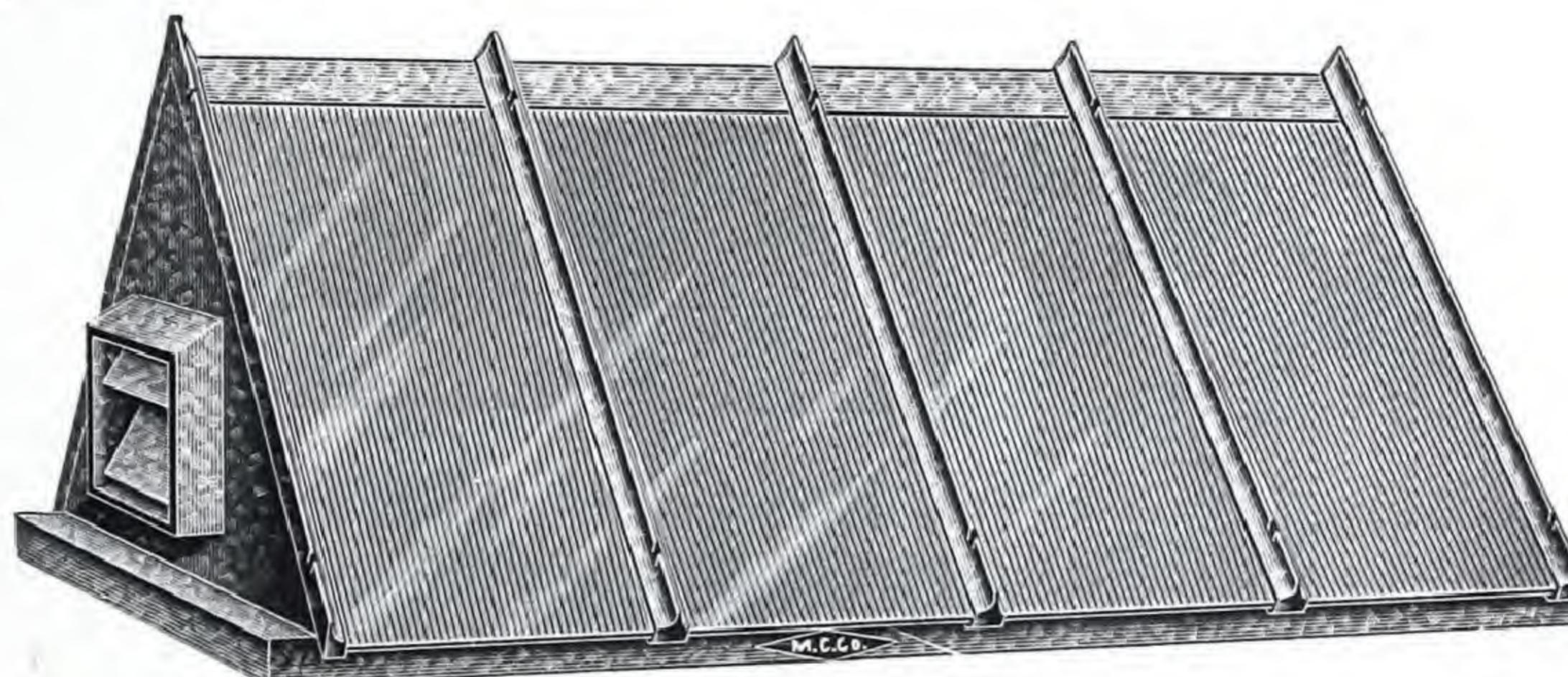
But to replace damaged glass in a puttied skylight involves considerable work — digging out the hardened putty, scraping all edges clean, fitting in the glass and re-puttying. It demands a skilled workman to produce a satisfactory replacement. Contrast that bother and expense with the simplicity and economy of merely fastening the copper clips of the "Puttyless" around the glass.

The complete line of Milcor "Puttyless" Skylights can also be made up in Standard Style (Laid-in-Putty) if desired. We are also prepared to furnish special sizes, made up to Architects' or Contractors' specifications, in either Puttyless or Puttied Construction.

No. 895

MILCOR "Puttyless" Skylight

Double Pitch — with Louvre Ventilator on ends. Made of 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets, or Pure Copper — in all standard sizes from 3 feet square to 10 feet square. Special sizes as specified.



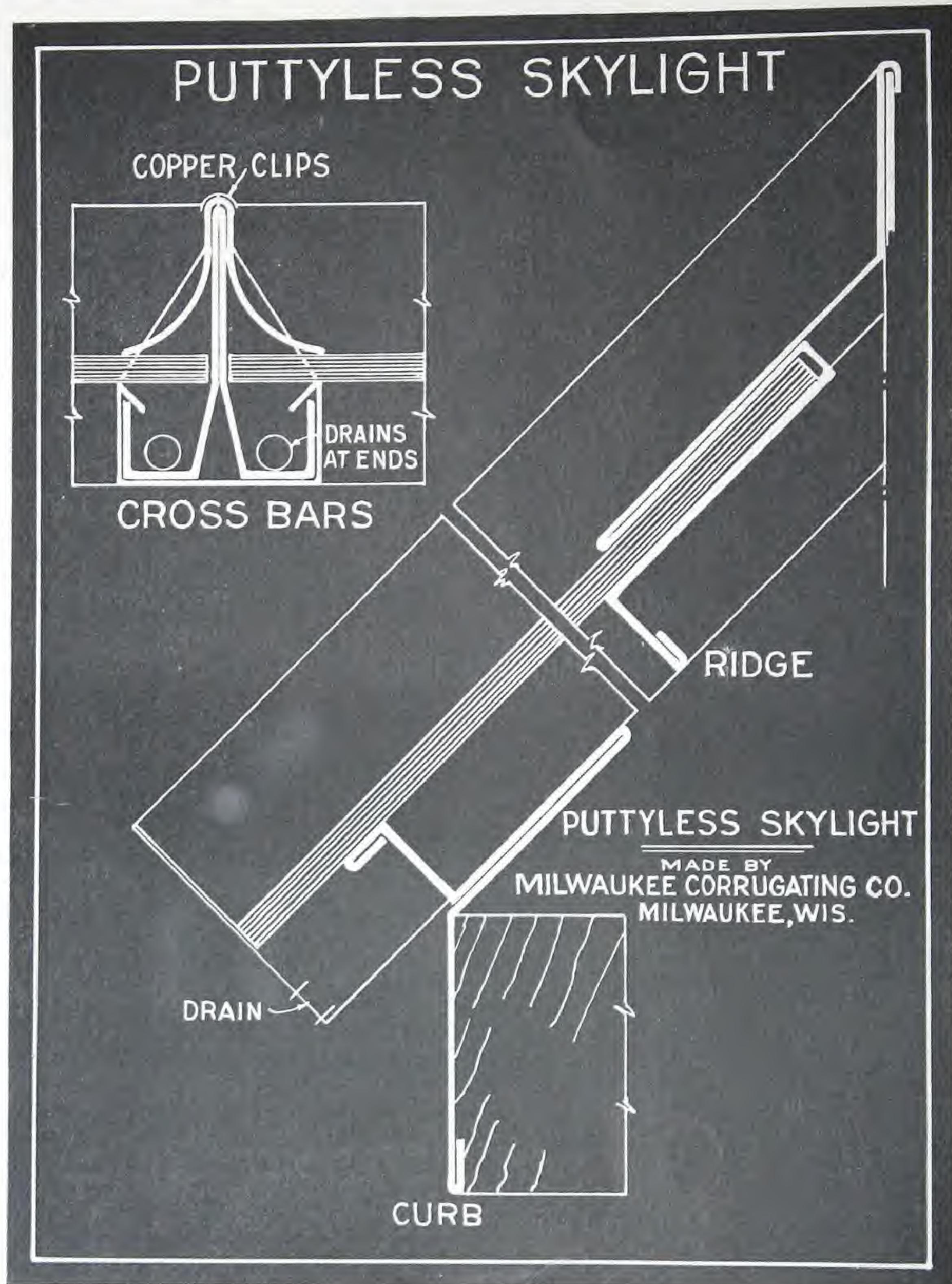
ONE of the popular Double Pitch "Puttyless" Skylights. Ribs and cap, fastened together with copper clips, or cleats, extend from the sash through the ribs and are then clinched. This method provides for expansion and contraction and makes it very easy to replace glass when necessary.

Louvre Ventilators in both ends — snow tight, waterproof. Frames are made to fit over wood curb.

All Skylights are furnished with ribbed glass unless otherwise ordered. Wired glass available if desired.



Laid-in-Putty — double pitch — same style and furnished in same sizes and grades as No. 895 (see description above) with exception of Puttyless features.



Details of the "Puttyless" Feature

THE cross sectional detail of the Puttyless Bar construction shows how the Copper Clips, fastened over the cross bars, securely hold the glass in position, leakproof, without the use of any putty. The above details show the practical provision that is made in all Milcor Skylights for condensation of atmospheric moisture and drains for rain.

All Puttyless and other Milcor Skylights are made water-tight and are sturdily built. Bars are riveted and soldered, making rigid, enduring joints.

It is a simple matter to replace damaged glass in Puttyless Skylights and it can be done quickly, without special tools. The Puttyless line of Skylights is recommended as the most practical on the market.

No. 894

MILCOR
“Puttyless”
Skylight

Single pitch—made of 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper—in all standard sizes from 3 feet square to 8 by 14 feet. Special sizes can be made as specified.

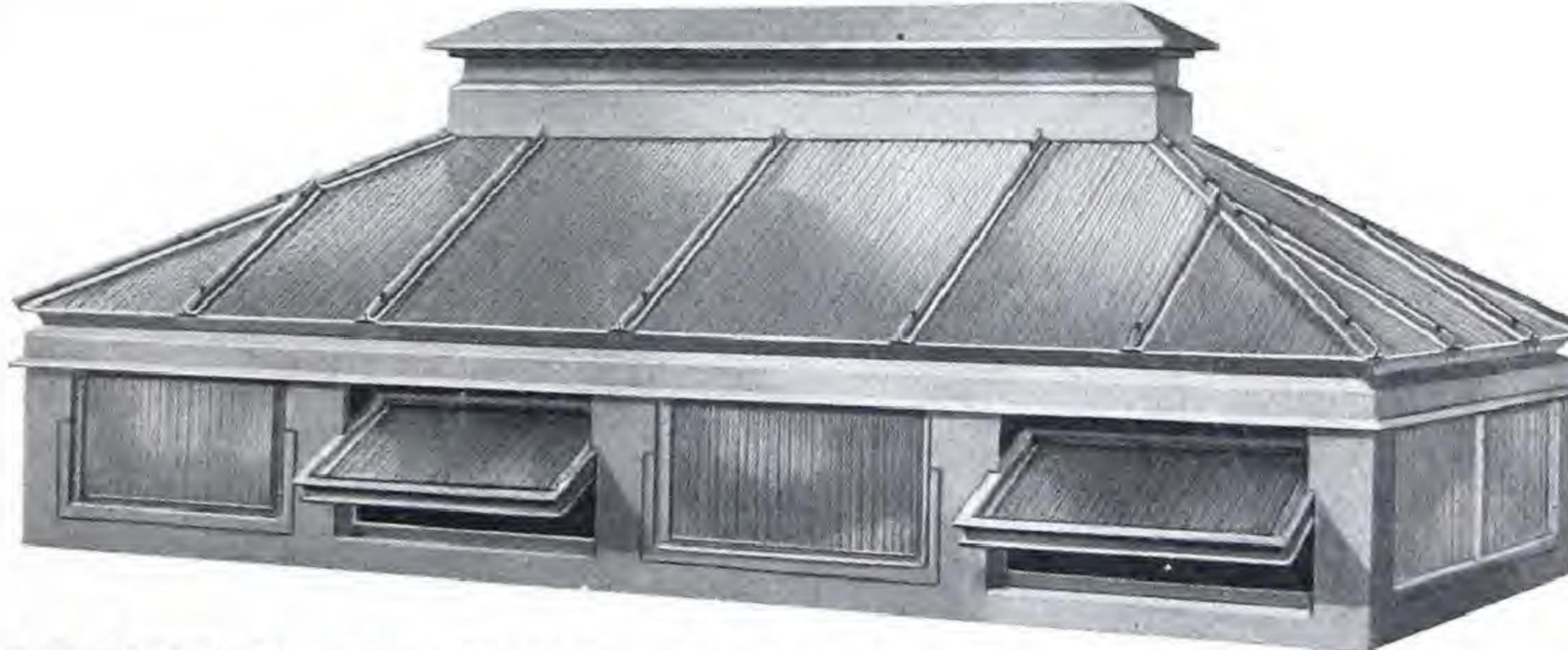


A SINGLE-PITCH Puttyless style, designed for curb having at least one-half pitch. Pitch may run long way or short way of skylight, as specified. This skylight can be hinged where required, to be used as a scuttle. Equipped with condensation gutter—snow proof and water tight. Frames made to fit over wood curb. Same Puttyless details as No. 895. Furnished with ribbed glass unless otherwise ordered, or wired glass, if specified.

No. 880

MILCOR
Standard
Skylight

Laid-in-Putty. Possesses similar general characteristics and is made in same sizes and grades as the No. 894 (see description above) with exception of the Puttyless feature. Can be mounted on curb of any desired pitch.



No. 899

MILCOR
“Puttyless”
Skylight

Hipped-turret type with ridge Ventilator. Made of 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper—in all standard sizes from 3 feet square to 8 by 14 feet. Special sizes can be made up as required.

THIS Puttyless Skylight with its hipped turret, ridge ventilator and movable side sash is a highly desirable, efficient and attractive combination. The Puttyless feature on this type of Skylight is particularly valuable. The side sash are pivoted at center of sides so as to open easily from the inside, and are equipped with a good locking device. Condensation gutter built into this model as it is in all Milcor Skylights.

Furnished with ribbed glass unless otherwise ordered. Wired glass if specified.



No. 885

MILCOR
Standard
Skylight

Laid-in-Putty Has all the features of the No. 899 (see description on preceding page) except that its glass is not fastened by the Puttyless method. Made in same sizes and grades as the No. 899.



No. 898

MILCOR
“Puttyless”
Skylight

Hipped-turret type with stationary Louvre Ventilators on sides and ends. Made of 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper—in all standard sizes from 3 feet square to 8 by 14 feet. Special sizes can be made up as required.

See page 34 for Puttyless Details.

THIS Puttyless Hipped Turret Skylight is quite similar to the No. 899 described on page 35, except that this 898 has no ridge ventilator and its stationary Louvre Ventilators take the place of the swinging side sash of the 899.

The Puttyless feature is embodied in this Skylight—the ribs that hold the glass in place are fastened with copper cleats from the sash through the ribs and then clinched, thus providing for contraction and expansion and making glass replacements easy. Simple in construction, sturdy, cannot leak and is inexpensive. All Milcor Skylights have condensation and ventilation gutters.

Furnished with ribbed glass unless otherwise ordered. Wired glass if specified.



No. 884

MILCOR
Standard
Skylight

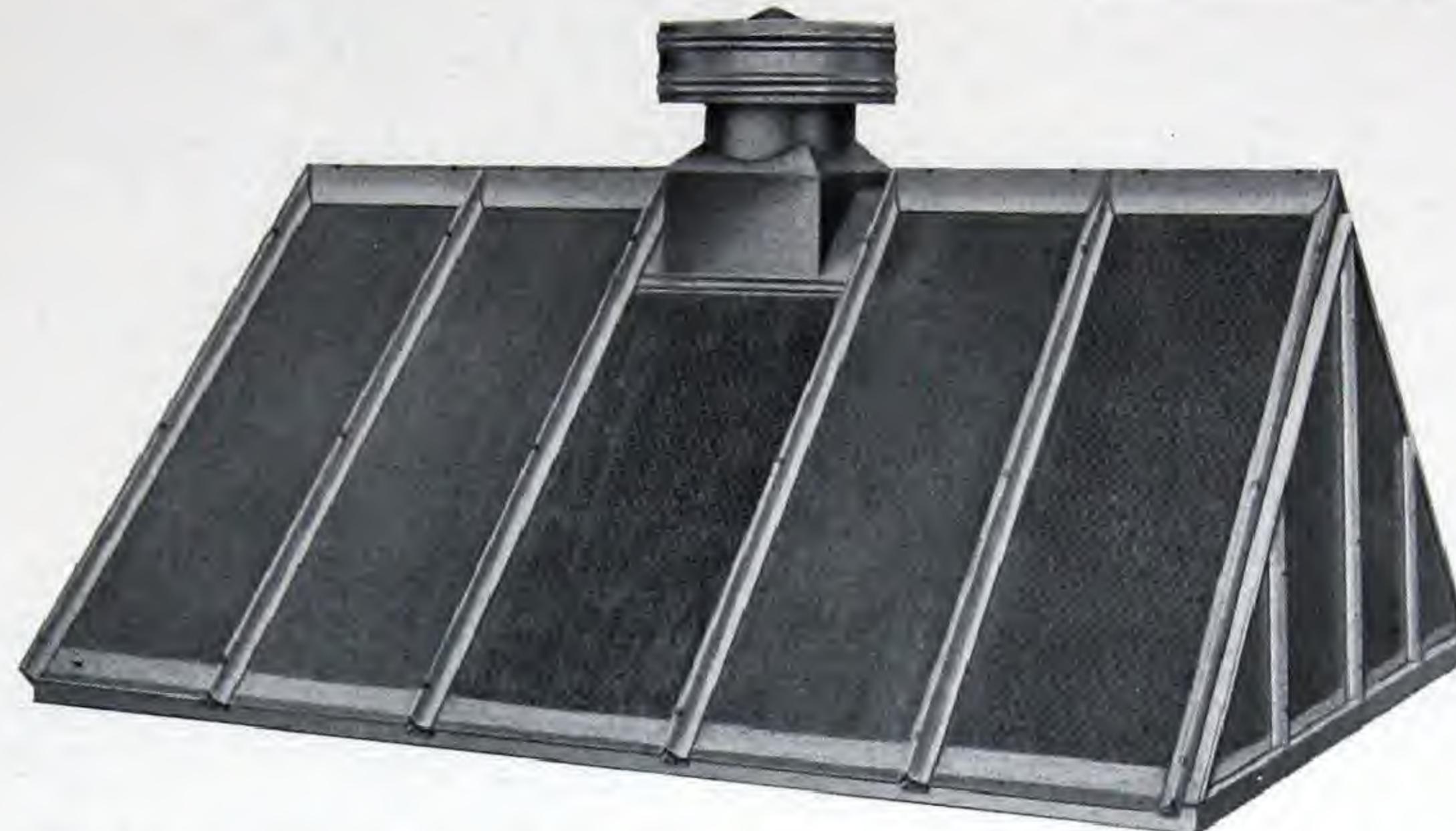
Laid-in-Putty. This Skylight is the same in every respect as the No. 898, described above, with the exception of the Puttyless feature. Made in the same sizes and grades as No. 898.

No. 896

MILCOR “Puttyless” Skylight

Double Pitch—made of 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper—in all standard sizes from 3 feet square to 10 feet square and 8 x 14 feet. Special sizes can be made as specified.

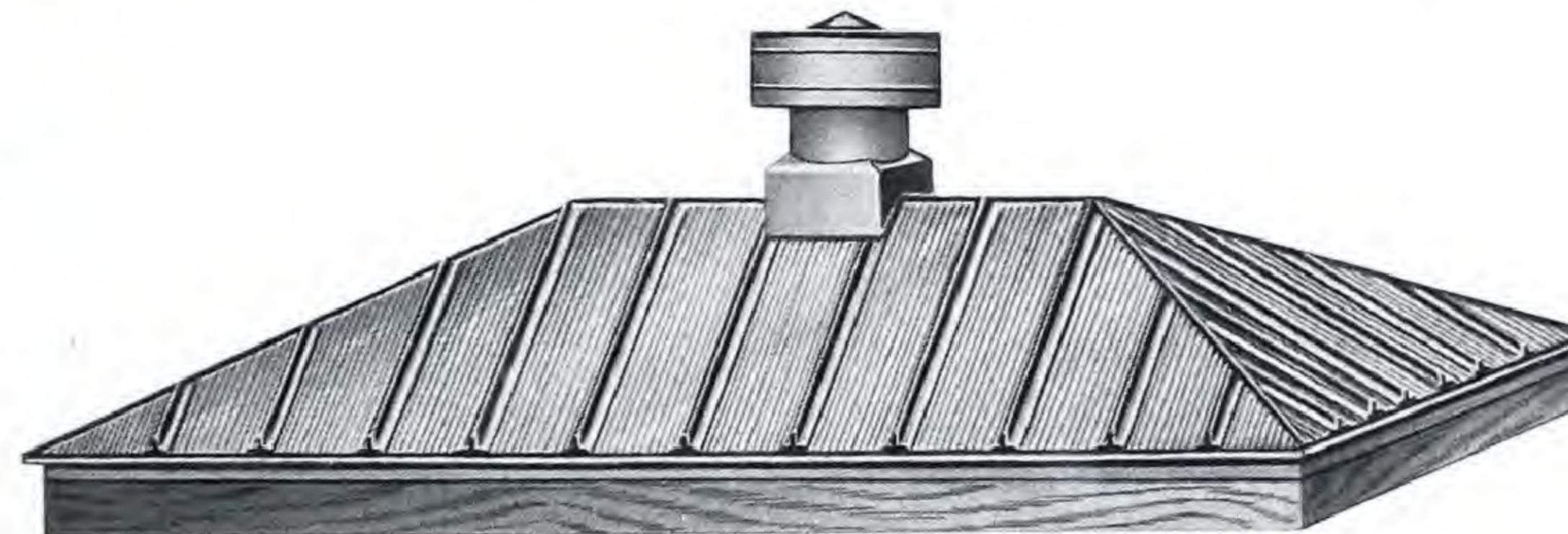
See page 34 for Puttyless Details.



THE above Puttyless Model is a combination of a skylight and a tubular ventilator for buildings where both features are desirable in one unit. The Puttyless feature is an important advantage on this type of skylight. Condensation and ventilation gutters built into this model, as in all Milcor Skylights.

Regularly equipped with ribbed glass but furnished, if desired, with wired glass.

When giving measurements always designate from out to out of wood curb.



No. 883

MILCOR Standard Skylight

Laid-in-Putty — similar in style and made in same sizes and grades as No. 896 (see description above) except for Puttyless feature and hipped ends. Furnished with Ventilator and Damper unless otherwise ordered but is also carried without Ventilator.

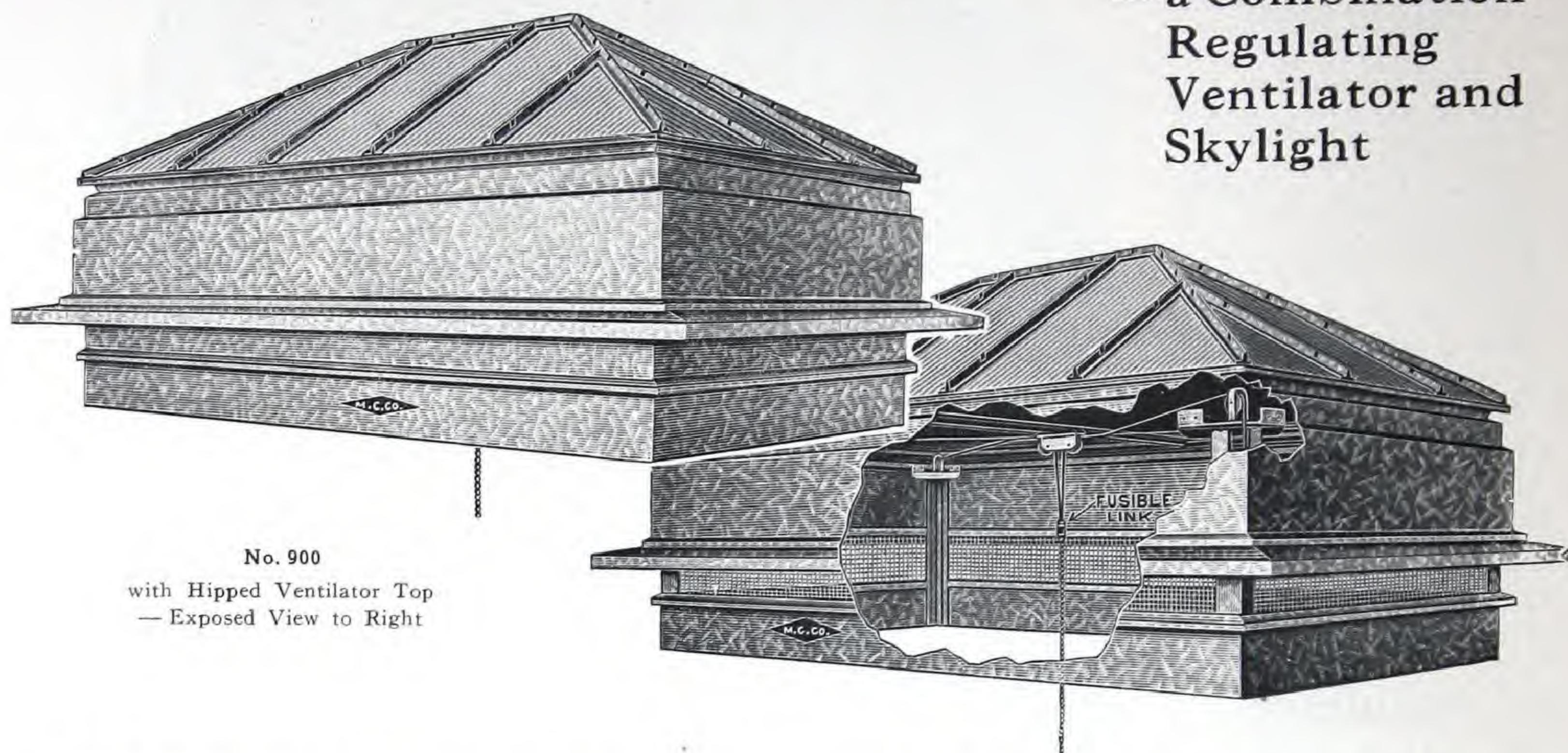


The No. 897 has all the features of other Milcor Puttyless Skylights plus the advantage of the additional light afforded by the hip construction. Frames are made to fit over wood curb.

See page 34 for Puttyless Details.

MILCOR “Torpedo” Ventilating Skylight

— a Combination
Regulating
Ventilator and
Skylight



THE unique efficiency of the Milcor “Torpedo,” both as a Ventilator and as a Skylight, appeals to Architects and Builders for a wide variety of types of buildings.

Its hipped glass top lets in an abundance of diffused light, as a good skylight should, and as a Ventilator it has many highly com-

mendable features. Its movable shutter regulates the amount of ventilation. The controlling mechanism is simple and easy to operate — you merely pull down the chain or release it according to the amount of opening desired. The ventilating opening is screened to prevent entrance of birds, sparks or embers.



The No. 901 Milcor “Torpedo” has the same features as the No. 900, except that No. 901 has merely a Single Pitch Skylight top.

The No. 902 Milcor “Torpedo” has the same features as the No. 900 and No. 901, except that No. 902 has a Double Pitch Skylight top.



The automatic fireproof feature of the "Torpedo" is one of its most important advantages. In the illustration on page 38, notice the "fusible link." In case of fire, if the Ventilator is open, the heat will cause this link to separate or disconnect. The shutter will then drop automatically from its own weight, closing the ventilator opening and shutting

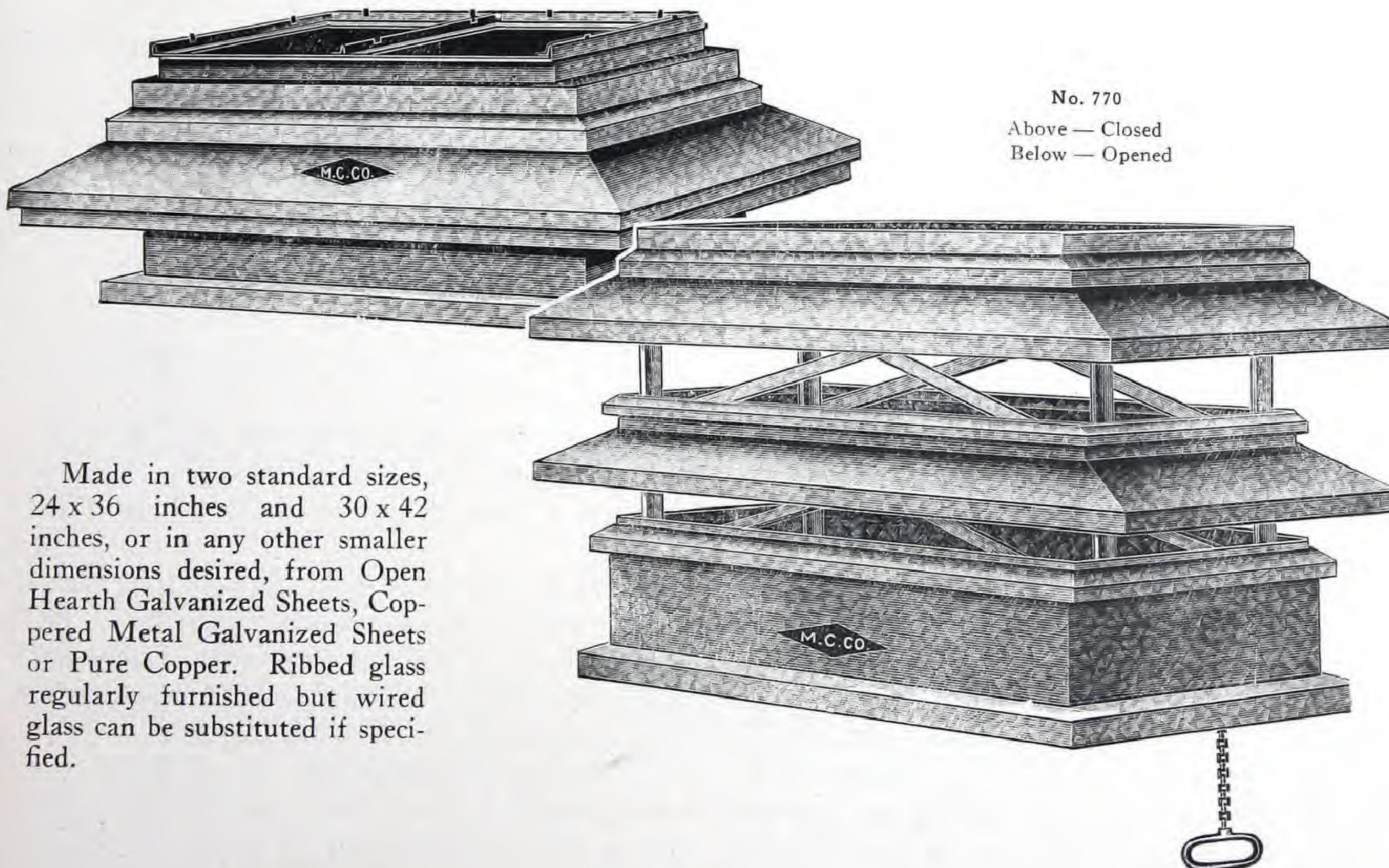
off the draft, thus lessening the possibility of spreading the fire.

Milcor "Torpedo" Ventilating Skylights made in 14 sizes, from 3 feet square to 6 by 10 feet. Made from 26-gauge Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper — with Ribbed glass, or if specified, with wire glass.

MILCOR Collapsible Ventilators with Glass Tops

NO. 770 Milcor Collapsible Ventilators are ideal for inner halls or courts of apartment buildings, hotels, etc., and have been used extensively in Motion Picture Theatres over the Film Operating Booth where both light and ventilation are decidedly necessary.

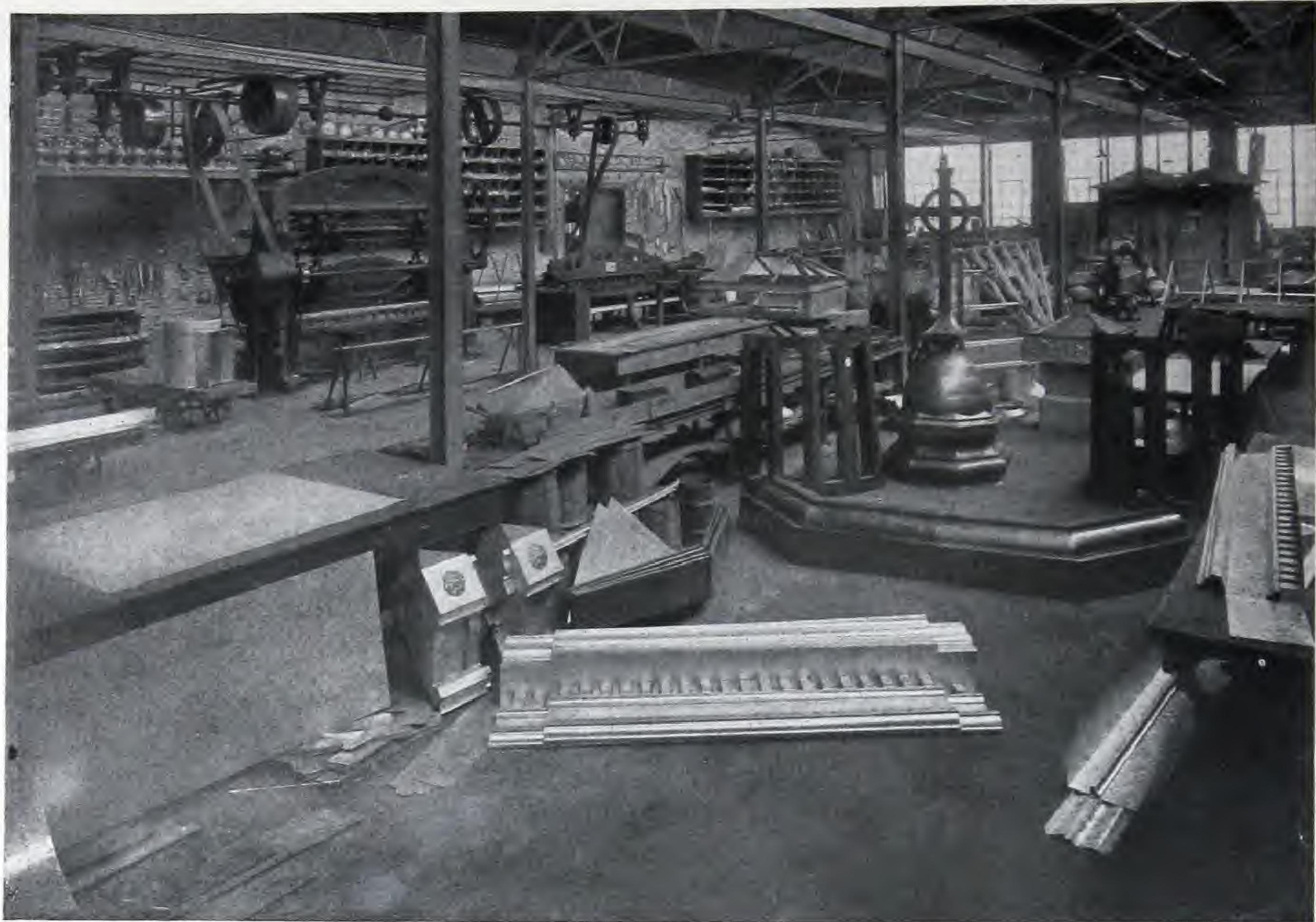
The movable sections of the Ventilator are raised and lowered by a chain working over a system of pulleys. The volume of ventilation can be regulated by pulling or releasing the chain. Simple and rugged in construction and very effective as a combined Ventilator and Skylight.



Made in two standard sizes, 24 x 36 inches and 30 x 42 inches, or in any other smaller dimensions desired, from Open Hearth Galvanized Sheets, Coppered Metal Galvanized Sheets or Pure Copper. Ribbed glass regularly furnished but wired glass can be substituted if specified.



ARCHITECTURAL SHEET METAL



A Section of the Milcor Cornice Division

MILCOR Ornamental Metal Cornices

Available in Stock Designs or Made to Specifications

SAFETY is such an important element in considering ornamental cornices that architects have welcomed particularly the development of Milcor Metal Cornices. Heavy, overhanging cornices of stone or masonry are mighty dangerous. And they are expensive.

Building cornices has become a particular feature of our business. We are prepared to furnish, right from stock, a variety of fine designs. What will interest architects most, is the fact that our facilities enable us to handle special cornice work, from the smallest units to large, elaborate pieces, reproducing

faithfully in metal the minutest details of original drawings.

Our stock designs or special cornice work can be done in Galvanized Open Hearth Steel, Galvanized Coppered Metal, or Pure Copper.

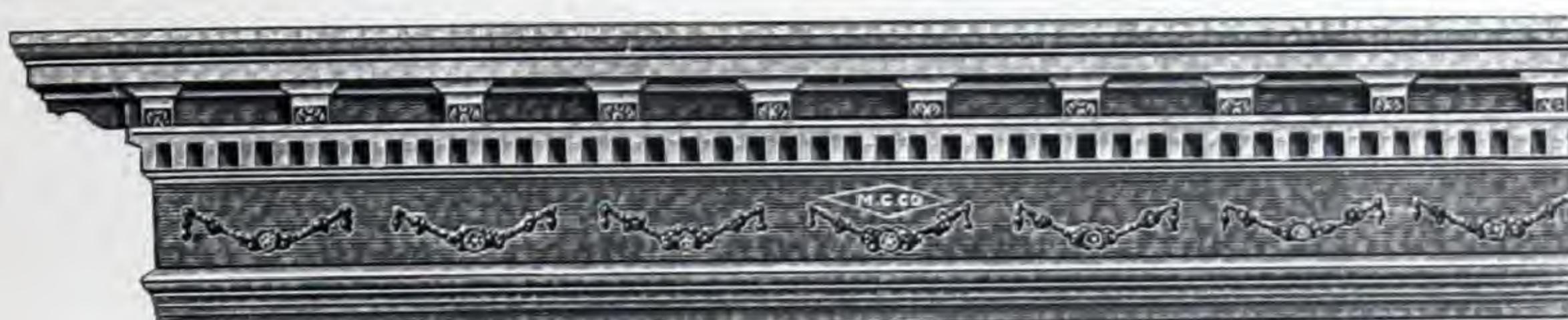
Send us your plans, sketches and specifications. Estimates promptly furnished. Do not hesitate to use this service as it does not obligate you in the least and it should help you sell more Milcor Metal Cornices.

Here are reproductions of a few of the many stock designs which we are prepared to furnish on short notice for use where spe-

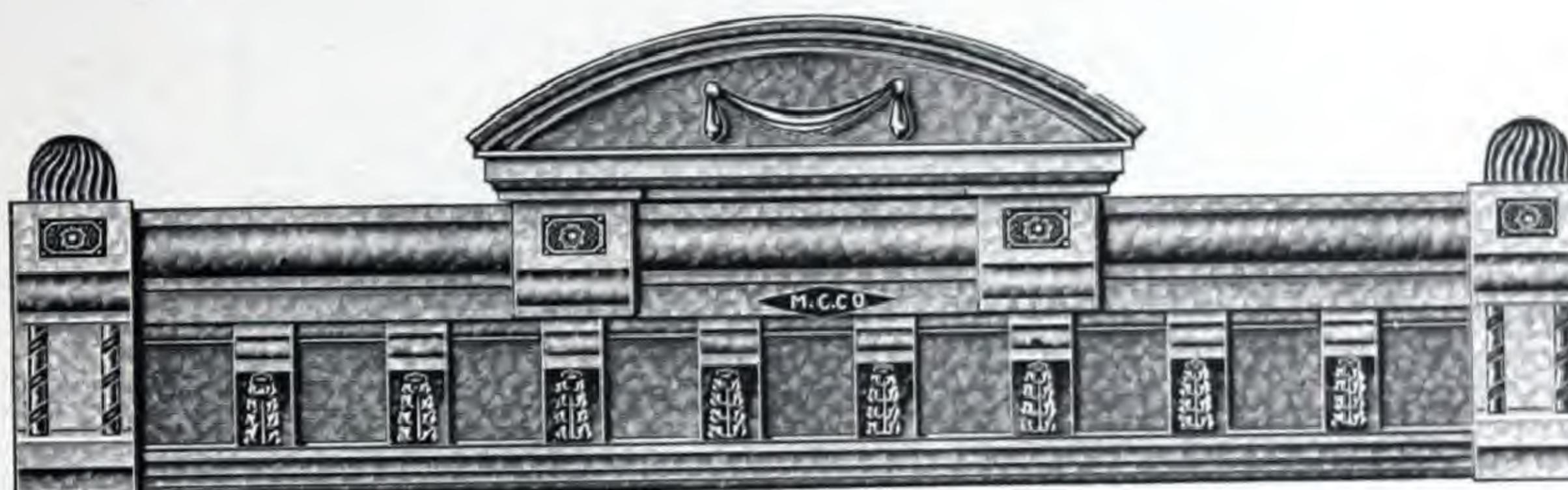
cially designed cornices are not imperative.

We furnish Milcor Cornices in large sections, complete, ready to erect. All Brackets,

Modillions and Dentils are riveted and soldered to the cornices, and the Moldings run through solidly.



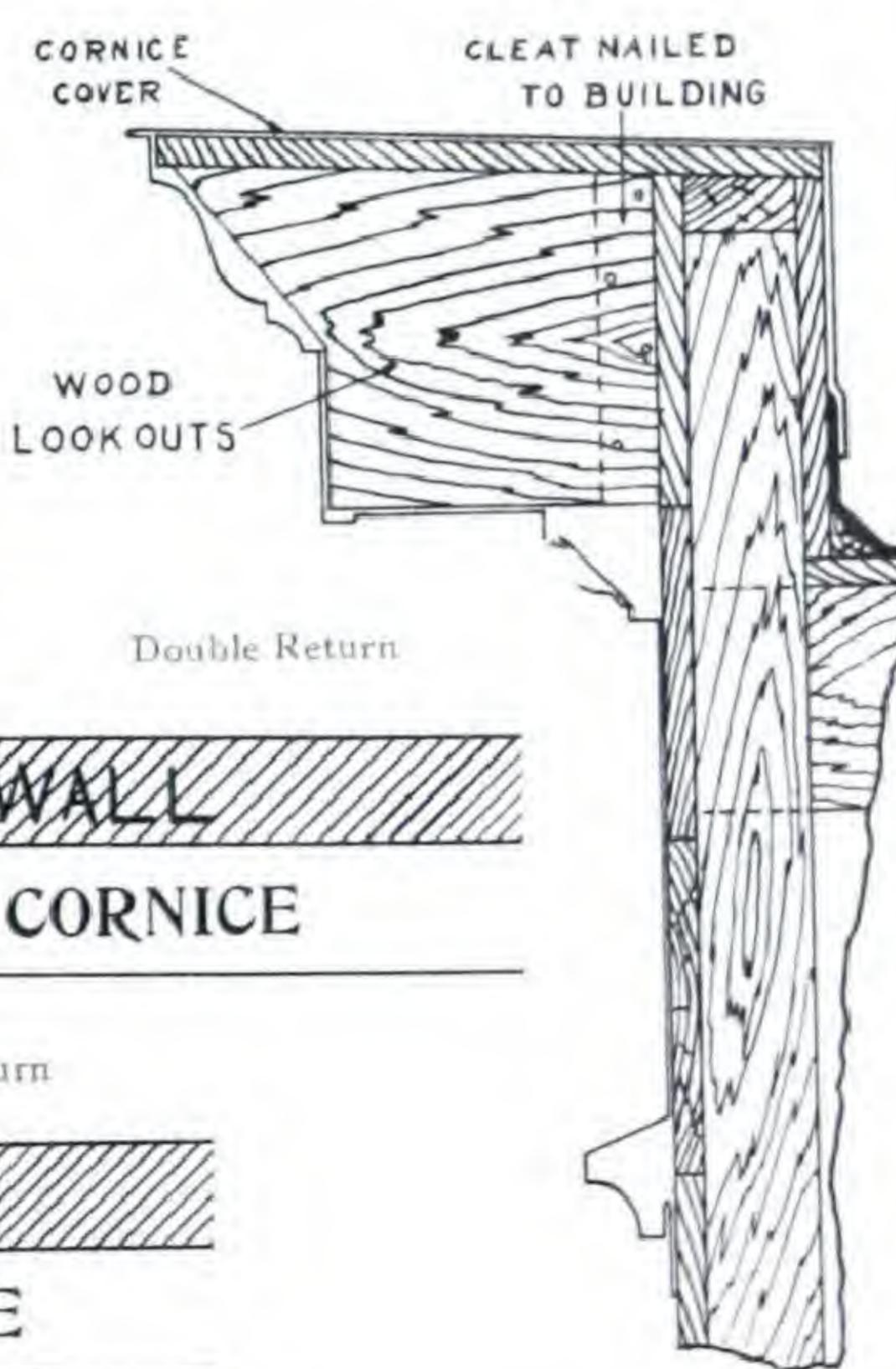
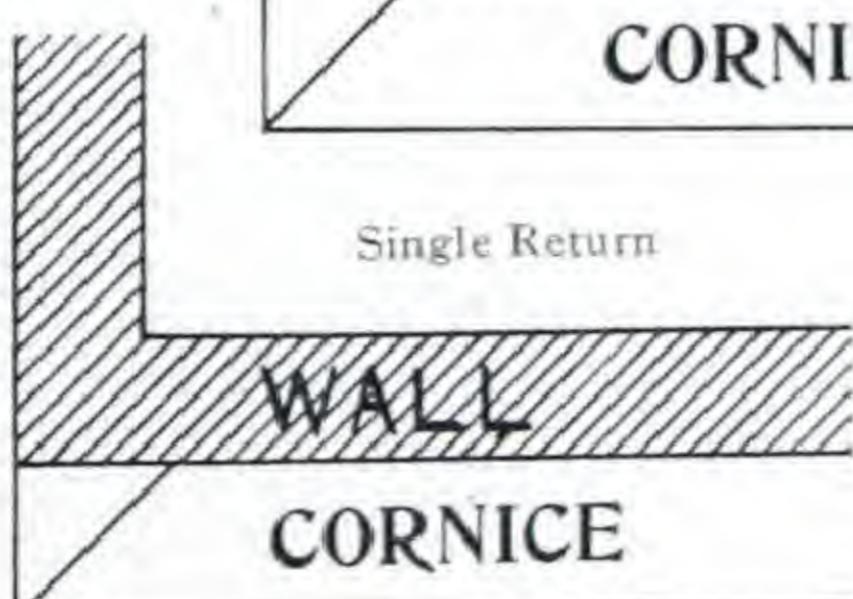
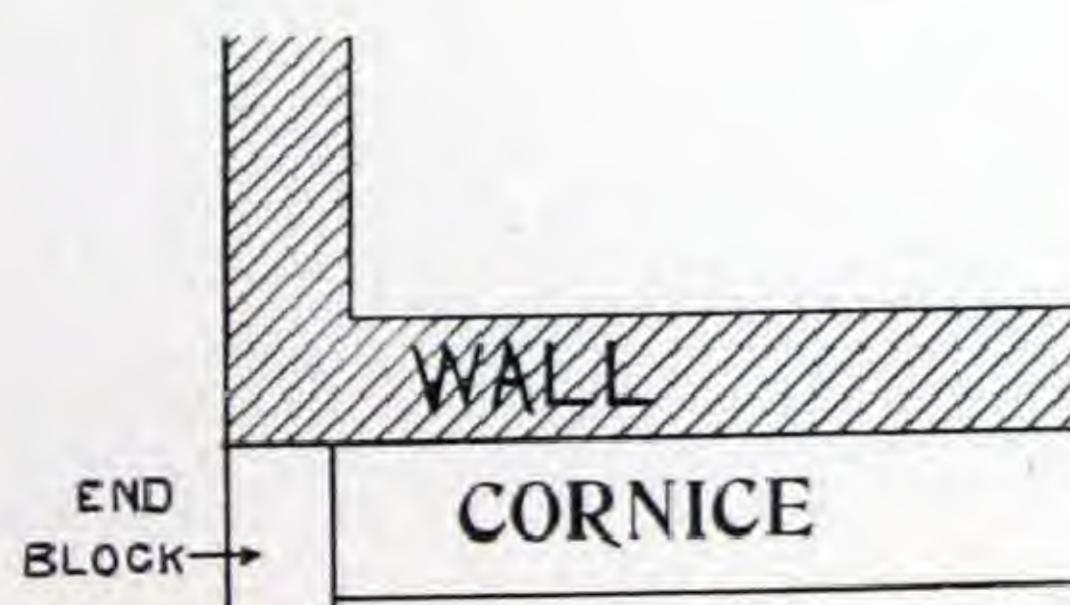
No. 367 Cornice, 42 inches high, 24-inch Projection, with No. 367 Mitres.



No. 351 Cornice, 30 inches high, 15-inch Projection, with No. 351 End Blocks, 12-inch Face, No. 359 Urns, and No. 351 Pediment.

On SPECIAL JOBS, Please Follow These Suggestions:

Give measurement of wall at foot of cornice, with diagram showing plan of wall at same place. Mention number of mitres; if any other than square, give exact angle. State finish desired at end — whether "return," "double return," or "end blocks" — also whether Cornice is to be built *into* or put on after wall is complete — also whether for Frame, Brick, Rock-face Stone or Concrete building. If Cornice Cover is wanted, mention thickness of wall and if wall extends above Cornice give height of wall extension. All End Blocks are 12 inches wide.



MILCOR

ARCHITECTURAL SHEET METAL



MILCOR

Sheet Metal Marquise or Canopies

Superior to Heavy, Clumsy, Cast Metal Marquise

THE heavy cast iron Marquise over entrances to buildings are no longer in vogue. That type of Marquise was clumsy in appearance, dangerous because of its ponderous weight, unduly expensive, difficult to erect and altogether impractical for many buildings.

Milcor Sheet Metal Marquise, or Canopies, eliminate all these objectionable features. They permit a fineness of design which it is impossible to obtain from other materials. They weigh only a fraction as much as cast iron types, thus relieving the building of considerable strain and making the entrance safer. When made of Pure Copper, Milcor Marquise are everlasting. When made of Open Hearth Galvanized Steel or Galvanized Coppered-Metal, they can be preserved indefinitely by occasional painting — less fre-

quent painting than is ordinarily required for cast iron types.

In spite of better appearance and such important practical advantages, Milcor Metal Marquise cost only a fraction of the price of cast iron Marquise.

We have specialized on this type of work and can point to many fine examples where much money was saved and unequalled artistic effects were produced by our methods. We are in position to submit appropriate designs and work out all details for any style of building if front dimensions and sizes of openings of structure are specified. Or we can follow the architect's layout and details precisely.

We build Marquise complete, ready to erect. Write for specific information and estimates whenever you have a Marquise problem to solve.

"Invisible Joint" Ceilings and Side Walls

PRACTICAL advantages not obtainable from any other type of ceiling construction are embodied in Milcor Invisible Joint Metal Ceilings. They are fire-safe, permanent, crack-proof, easy to erect, artistic and economical. They can never sag, crack or fall off. They are not affected by heat, cold or dampness.



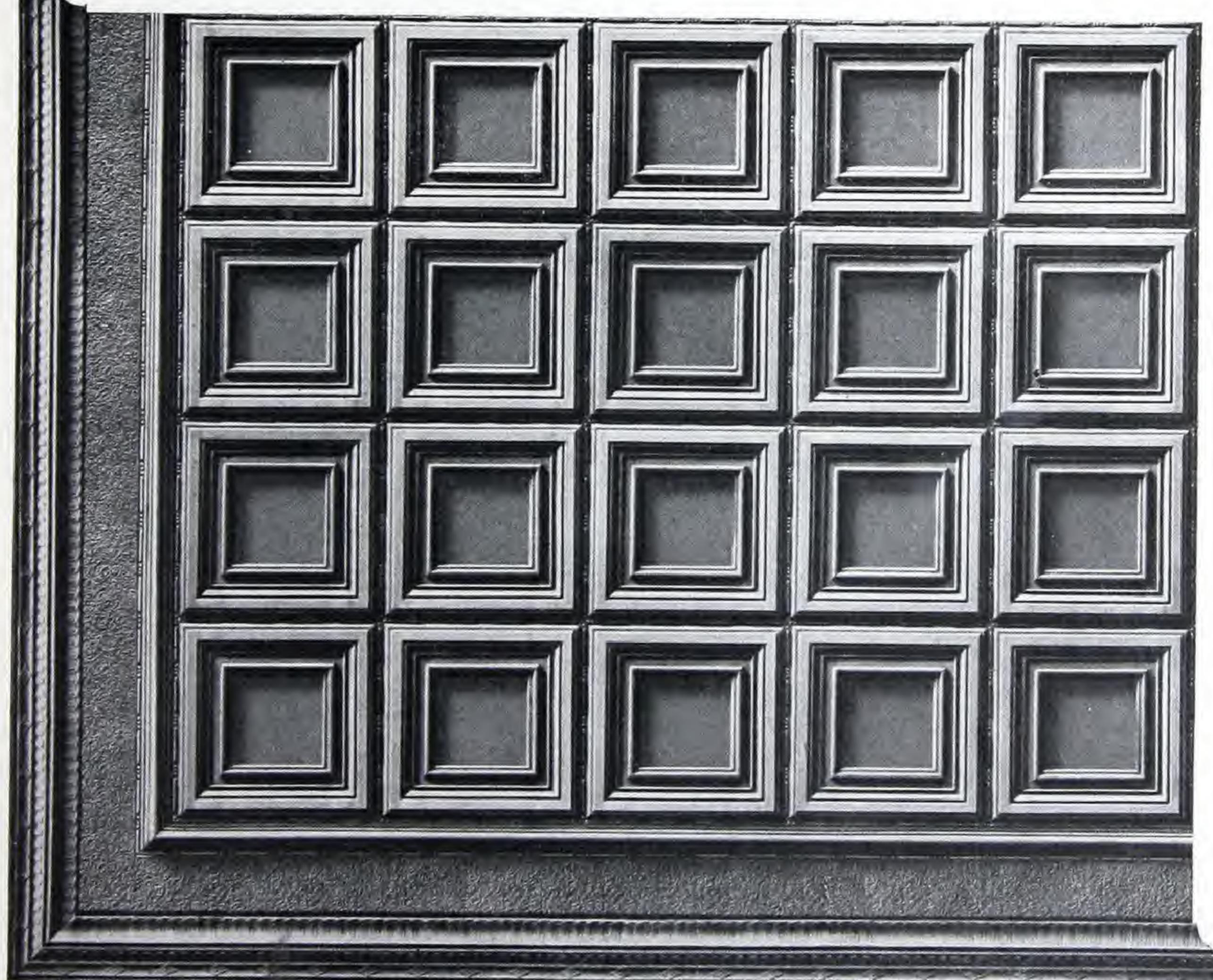
A single nail holds all four plates where four corners overlap.

The Nail Holes are Die Cut, Clean and Smooth.

CLEAN CUT NAIL HOLES

SAVE MECHANIC'S FINGERS

The Beads are re-pressed, making details bold.



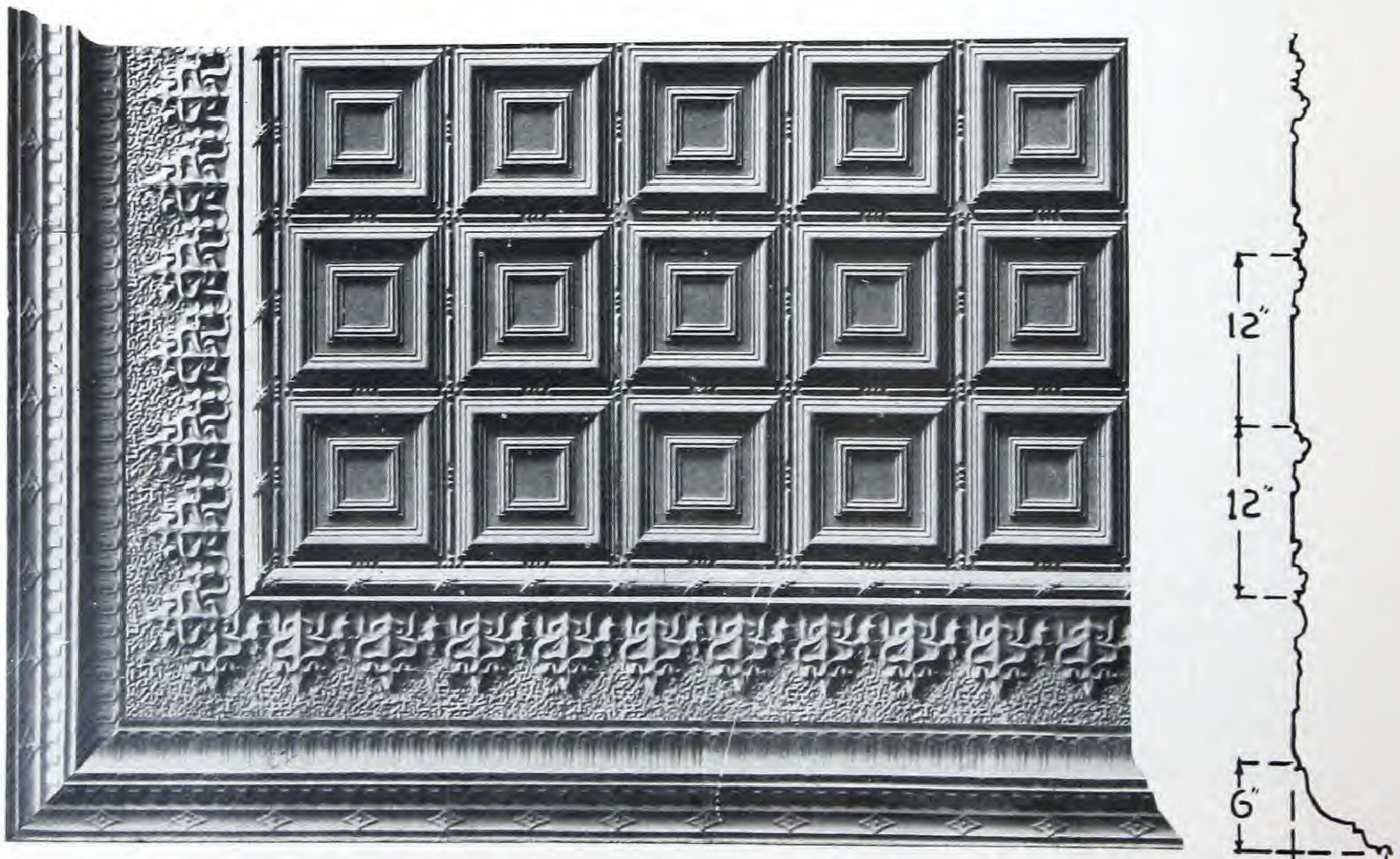
Colonial Design No. 2735 —

Cornice, No. 2432.
Molded Filler, No. 2244.
Field Plate, No. 2700.



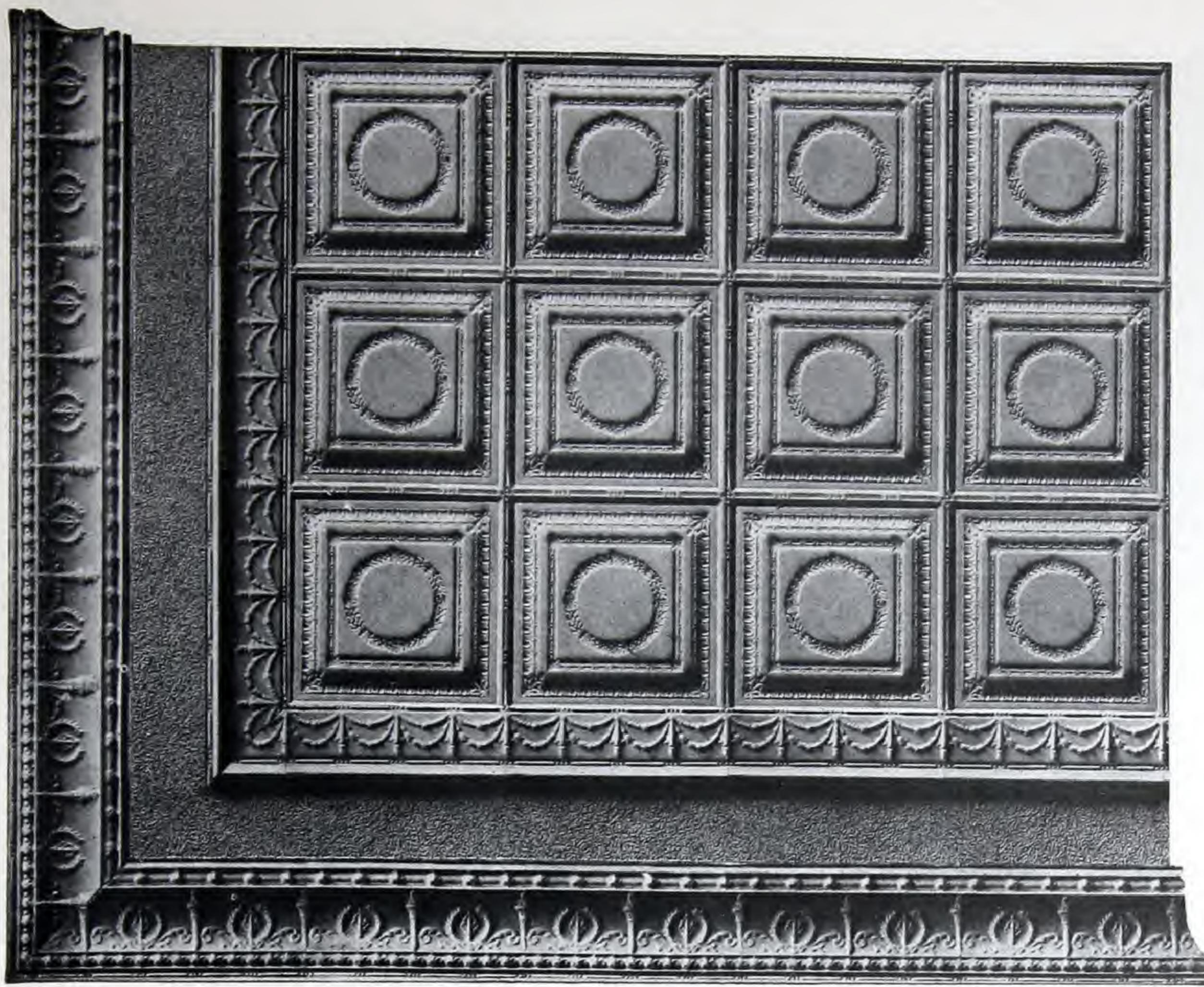
Colonial Design No. 2775 —

Cornice, No. 1928.
Molded Filler, No. 2715.
Field Plate, No. 2701.



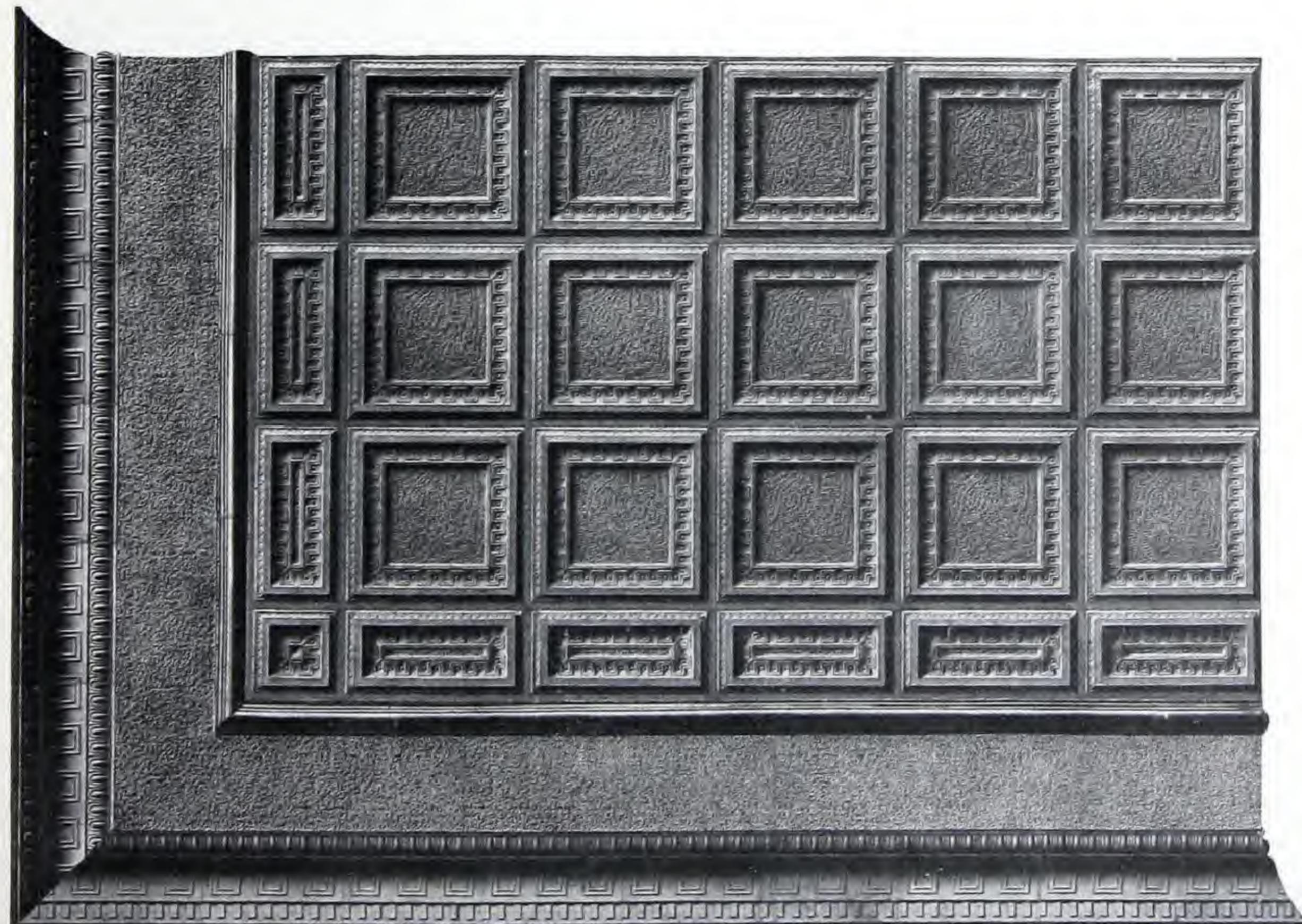
Colonial Design No. 2250 —

Cornice, No. 2432.
Molded Filler, No. 2142.
Field Plate, No. 2225.



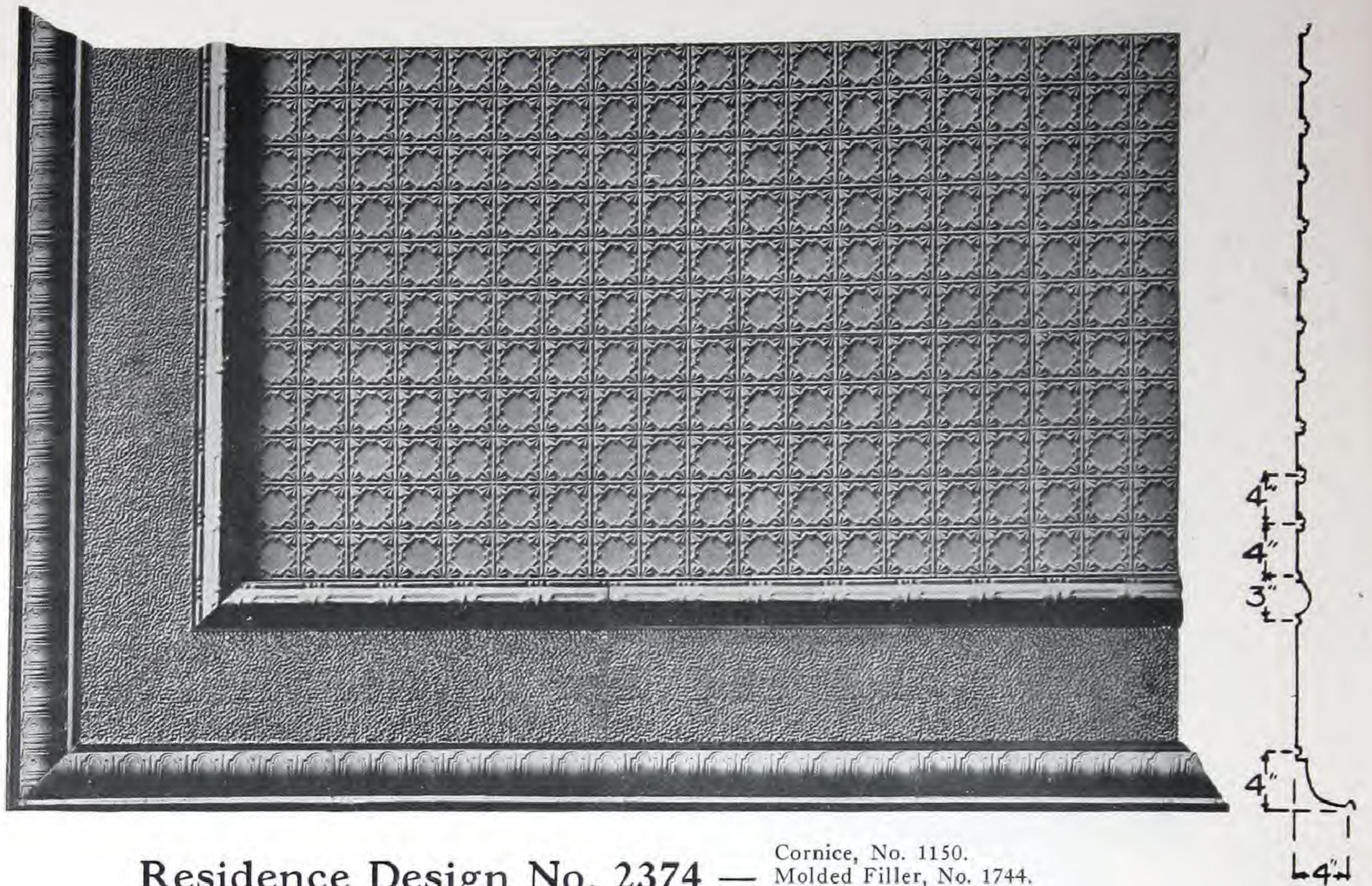
Colonial Design No. 1998 —

Cornice, No. 1931.
Bordered Filler, No. 1941.
Field Plate, No. 1911.



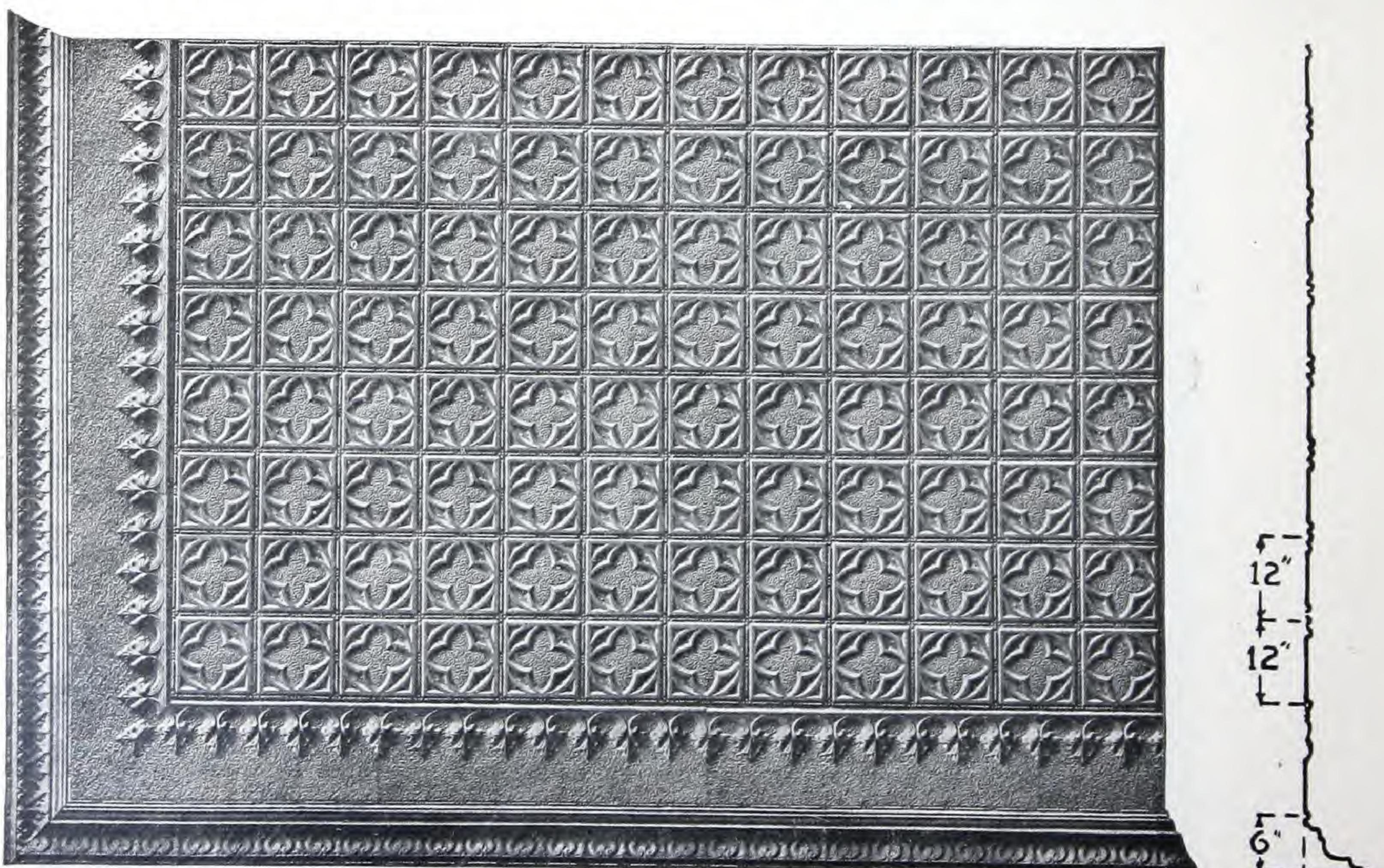
Grecian Design No. 2470 —

Cornice, No. 2431.
Molded Filler, No. 2244.
Border Plates, No. 2400.
Field Plate, No. 2400.



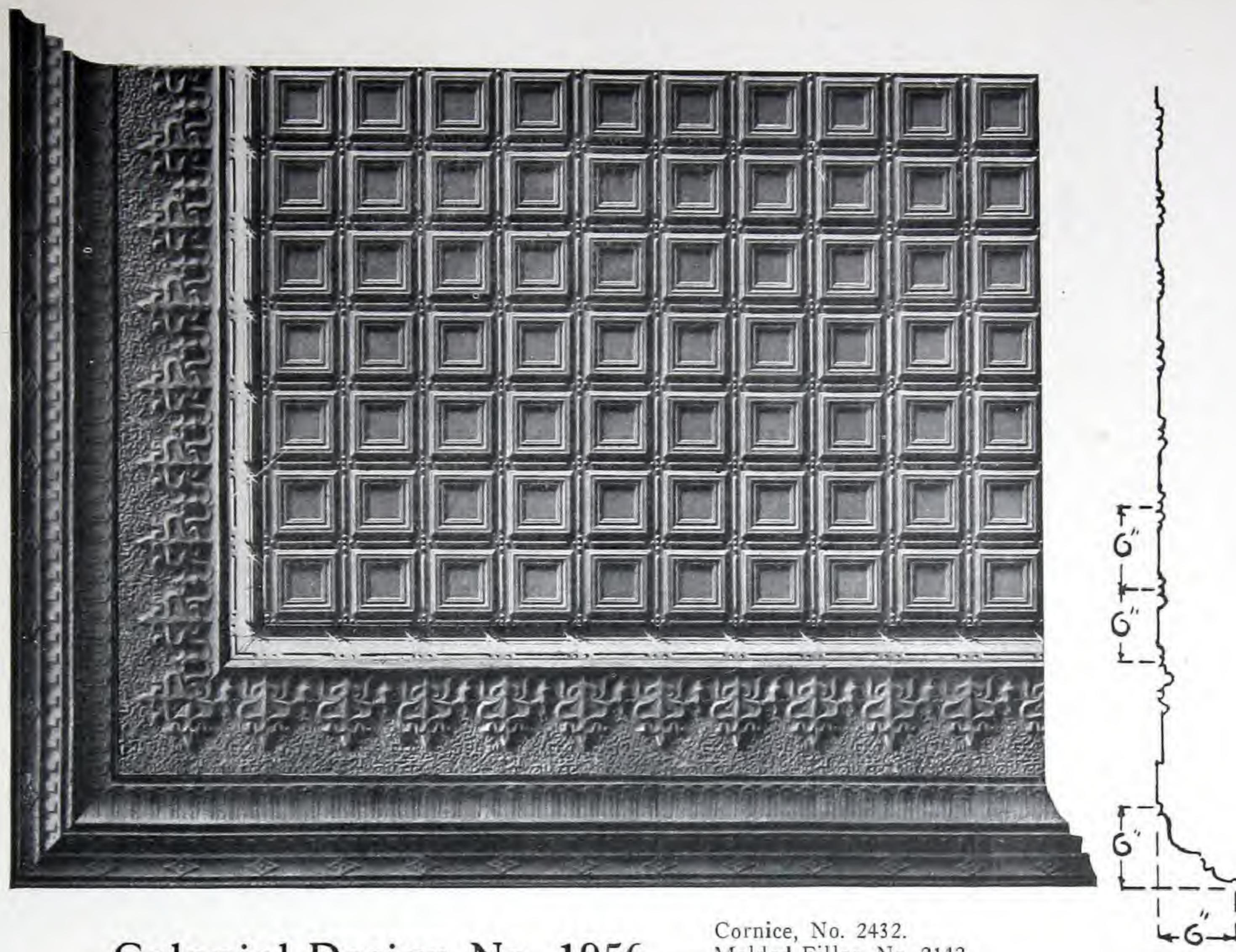
Residence Design No. 2374 —

Cornice, No. 1150.
Molded Filler, No. 1744.
Field Plate, No. 2306.



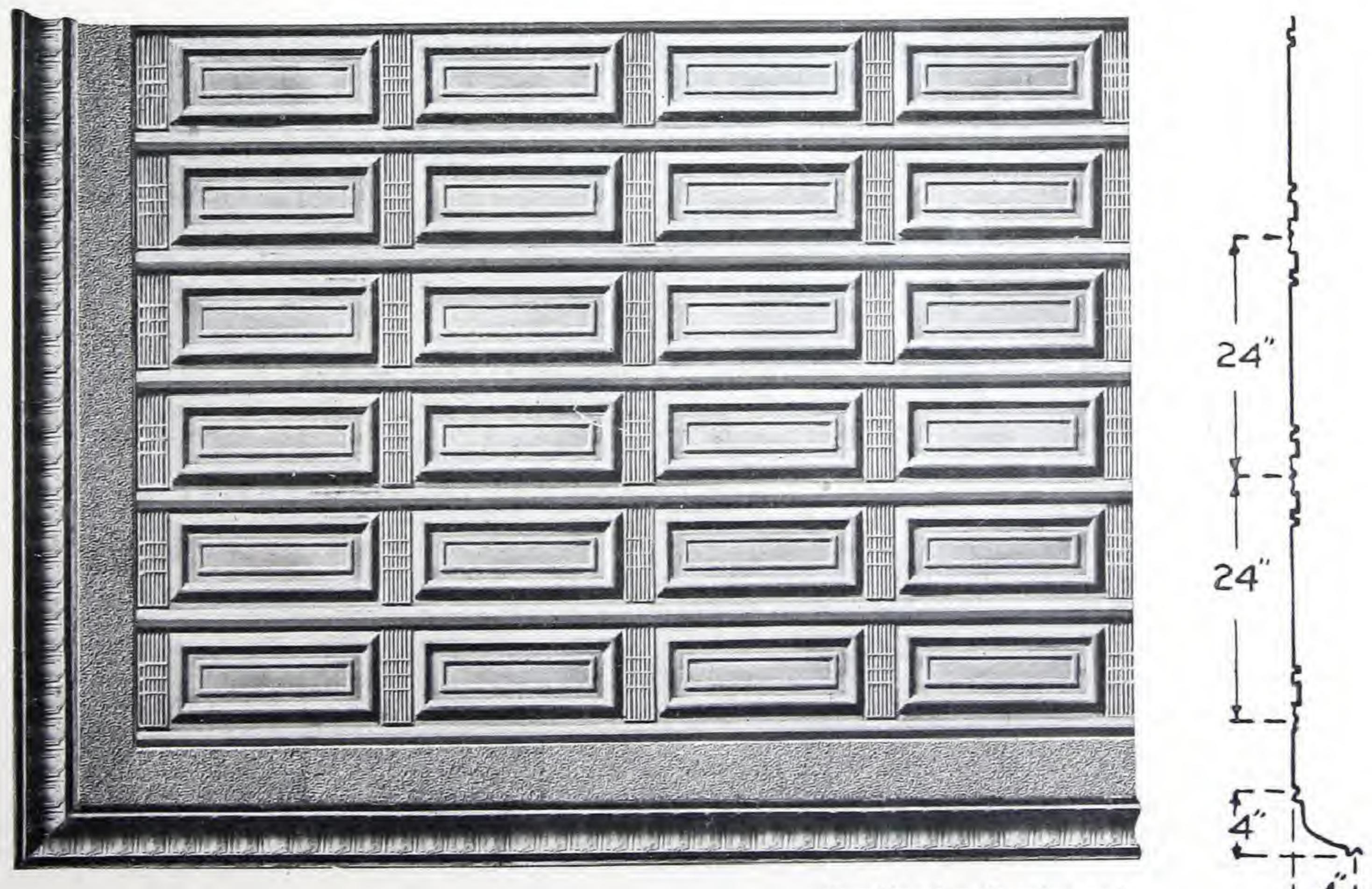
Gothic Design No. 1795 —

Cornice, No. 1731.
Molded Filler, No. 2041.
Field Plate, No. 1705.



Colonial Design No. 1956 —

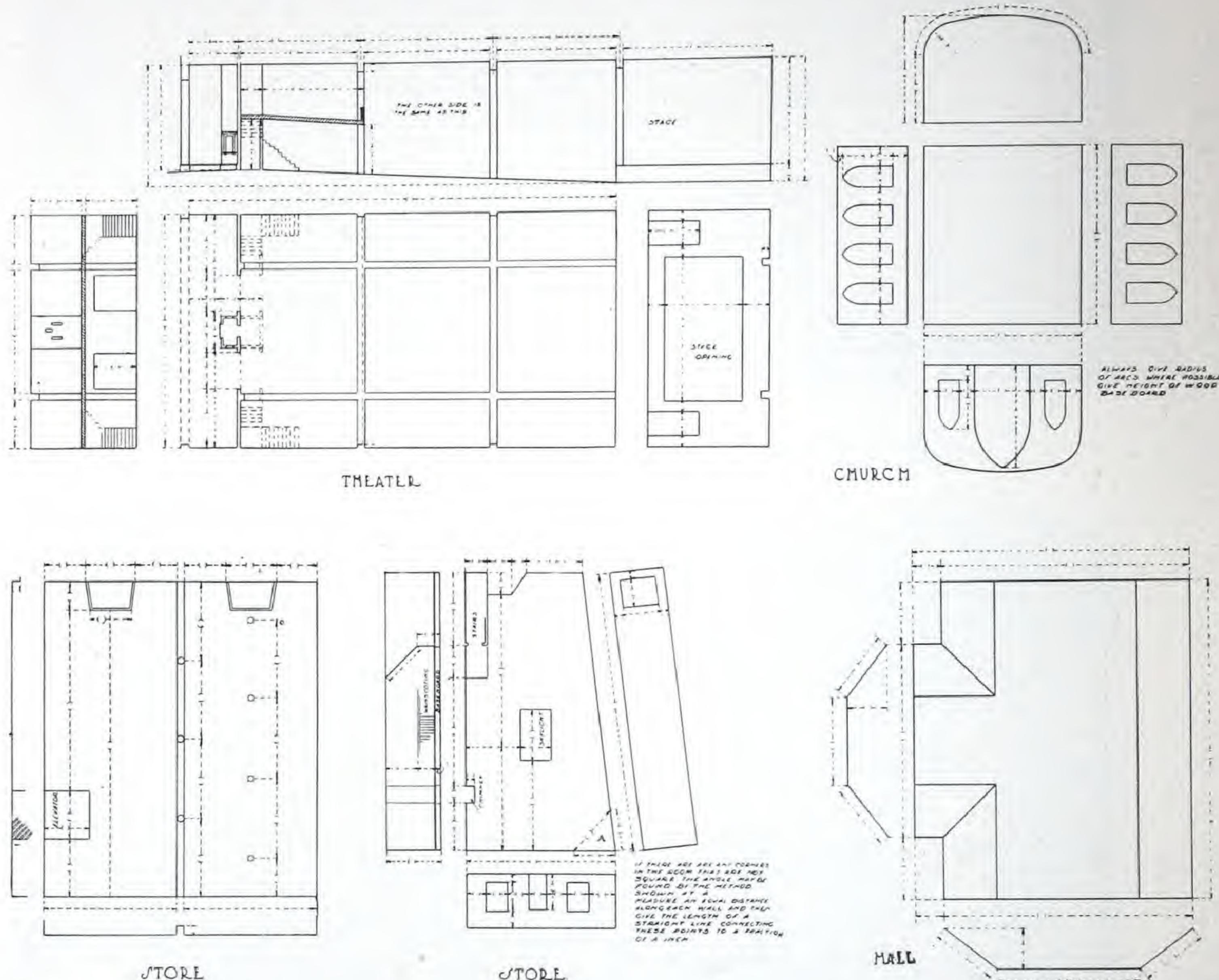
Cornice, No. 2432.
Molded Filler, No. 2142.
Field Plate, No. 1926.



Miscellaneous Design No. 1250 —

Combination Cornice and
Filler, No. 2333.
Field Plate, No. 1200.

Methods of Measuring Rooms for MILCOR, "Invisible Joint" Metal Ceilings and Sidewalls



THE diagrams above show the various measurements needed for different styles of ceilings. By following these fundamentals in making your measurements you will aid us in arranging appropriate combination designs.

When sending in measurements for metal ceilings or sidewalls, include a simple outline to indicate the shape and dimensions of the room. Drawings do not have to be made to scale — just give

exact measurements.

Also indicate the exact size and location of all offsets, such as chimneys, elevators, skylight openings, beams and stairways. State whether or not cornice may be used across front of room.

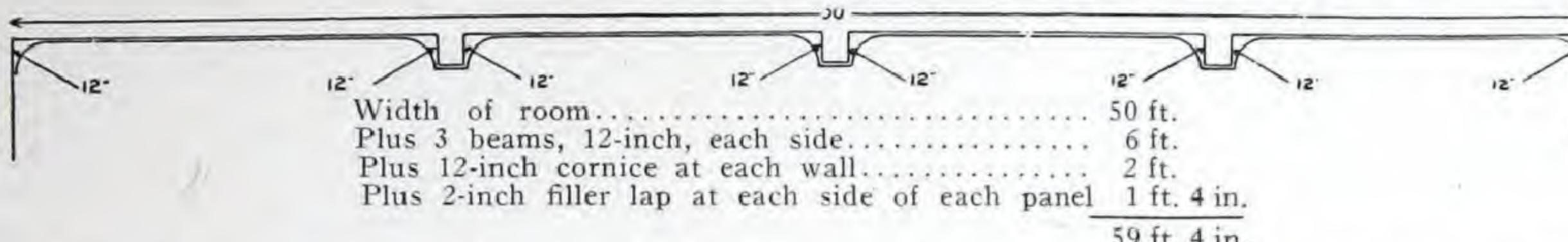
When estimating, do not make any deductions for skylight openings of less than 100 square feet, nor for stairways, chimneys or other openings or projections of less than 50 square feet.



How to Estimate Area of Ceiling

Add to the length of the room the depth of the cornice plus 2 inches for filler lap on both ends or wherever used.

Multiply this by the sum of the width of the room, depth of the cornice and 2-inch filler lap where used. For example: A room 26 x 54 feet, with 12-inch cornice on sides and ends, is figured as follows: (See column to the right.)



Our quotations and estimates will always include all sheet metal shown in the design specified, with one wood bracket cut to the profile of the cornices and moldings at

Length	54 feet
Plus 12-inch cornice on two ends....	2 feet
Plus 2-inch filler lap on two ends...	4 inches
	<u>56 feet 4 inches</u>

Width	26 feet
Plus 12-inch cornice on two sides....	2 feet
Plus 2-inch filler lap on two sides..	4 inches
	<u>28 feet 4 inches</u>

28 feet 4 inches \times 56 feet 4 inches = 1596 square feet

If rooms contain beams that must be covered, add for them as follows: (See diagram and explanation here.)

each lapping joint. The shipping weight of Milcor "Invisible Joint" Steel Ceilings is 65 lbs. per 100 square feet, crated. Accepted at fourth-class transportation rates.



Directions for Applying *MILCOR, "Invisible Joint"* Metal Ceilings and Side Walls

A BLUEPRINT working drawing showing the arrangement of the various plates, is furnished with every ceiling. Itemized packing sheets giving quantity and catalog number and size of the material are also included.

The first thing to do when a shipment arrives is to check the number of packages with the bill of lading. The contents of each package should then be checked and counted against the packing sheet.

Check the measurements on the blueprint with the building. If any material is short in the crates, or the blueprint does not agree with the building, notify us at once before you start to erect the ceiling. After the material and blueprint are carefully checked, proceed as follows:

If possible, it is best to scaffold the whole room, but a movable scaffold may be used.

When ceiling is boarded or sheathed most of our designs can be applied directly to the sheathing. If the ceiling is plastered, wood furring strips must be employed, with exception of Plate No. 1200, shown on page 47, as it is not practical to apply other designs direct to lath or plaster. It is not necessary to remove old plaster, as the wood furring strips will hold it in place. If plaster is loose, extra strips should be placed where necessary.

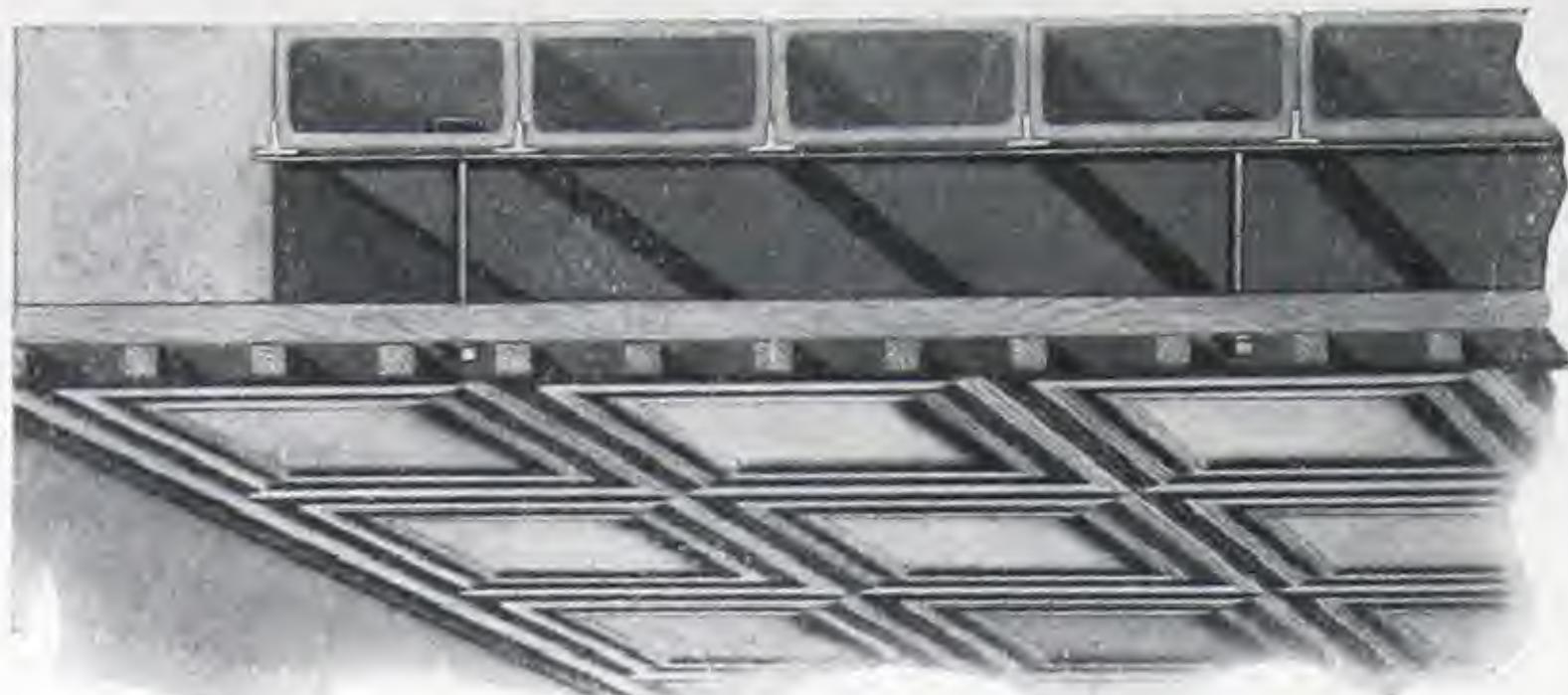
Follow the blueprint carefully and observe the starting point and center line. The starting point is not

always on the center line. Great care must be taken to make sure that the center line is in the exact center on both ends, as well as the middle of the room. Many rooms vary on the ends, so it is best to get the exact center on each end and strike a chalk line. This should be done lengthwise as well as crosswise of the room.

Observe whether plates start on the center line or not. If not, measure the proper distance on side of center line, and if wood strips are used, center the strips on this line. You then have the starting line one way of the building. The same operations are necessary the other way of the building.

On the plan, find the location of the starter plate. Observe the exact distance from the rear wall, and then, with the location of the starting line, you are ready to apply the field plates.

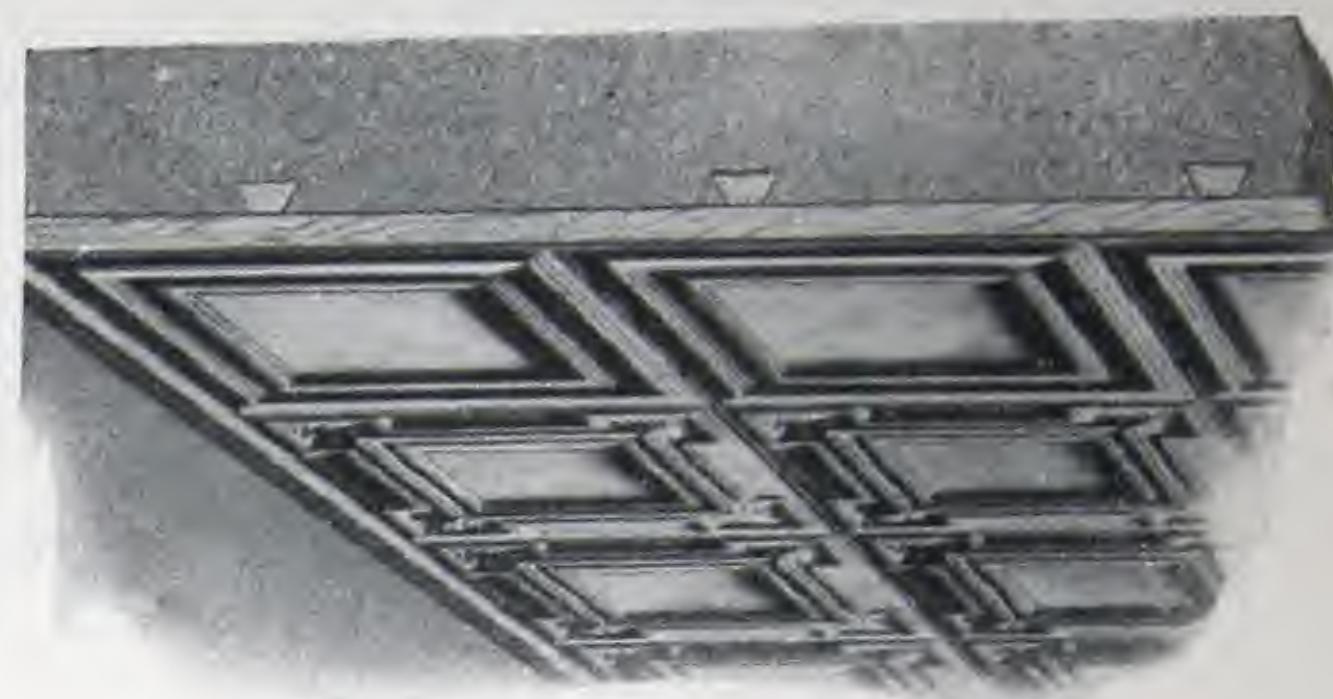
Strike a chalk line for each wood strip placed, taking care that the proper distance required will fit in the center of the strip. If the strips are put six inches on center for field plates, no cross furring is necessary. If placed twenty-four inches on center, cross furring is necessary every forty-eight inches, or on the end of every plate. The next step depends on the design and style of ceiling. If the design has a border around the field plates, this should be put on next. If a molding or molded filler is used, this can be applied next to the field plate or border.



Method No. 1

If a center ornamentation filler is used, this should be applied after the field plate is in position and before placing the mold or cornice. Care should be taken to get this filler in the exact center of the space. The cornice generally projects more than the mold, so great care must be used in striking the chalk line of the cornice and molding. The balance of the space will be covered by the center ornamentation filler.

After this the molding is applied. This makes a finish on one side of the filler. The cornice is applied last and completes the ceiling. We furnish stamped one-piece mitres for all cornices of a depth of four inches or over for right-angle corners only. All irregular mitres must be cut by the erector. We send a sufficient amount of material to make these mitres, but cannot be



Method No. 2

held responsible for any unnecessary waste of materials.

When iron girders are used in a building and are to be covered with metal ceiling, it is necessary to build woodwork around same to receive the ceiling, the construction of which will be shown on the drawing we furnish.

Ceiling plates cannot be arranged to accommodate gas and electric light drops; but all such drops must be placed to conform to our drawing and layout. Lights can be dropped from either the center or corner of the plate, which necessitates but very little change to get them to come about where they are wanted.

Side walls are easily applied. One-half inch sheathing or strips are used. If strips are used, they should be placed six or twelve inches on center.

Metal Ceilings as Applied to Concrete Construction

Method No. 2

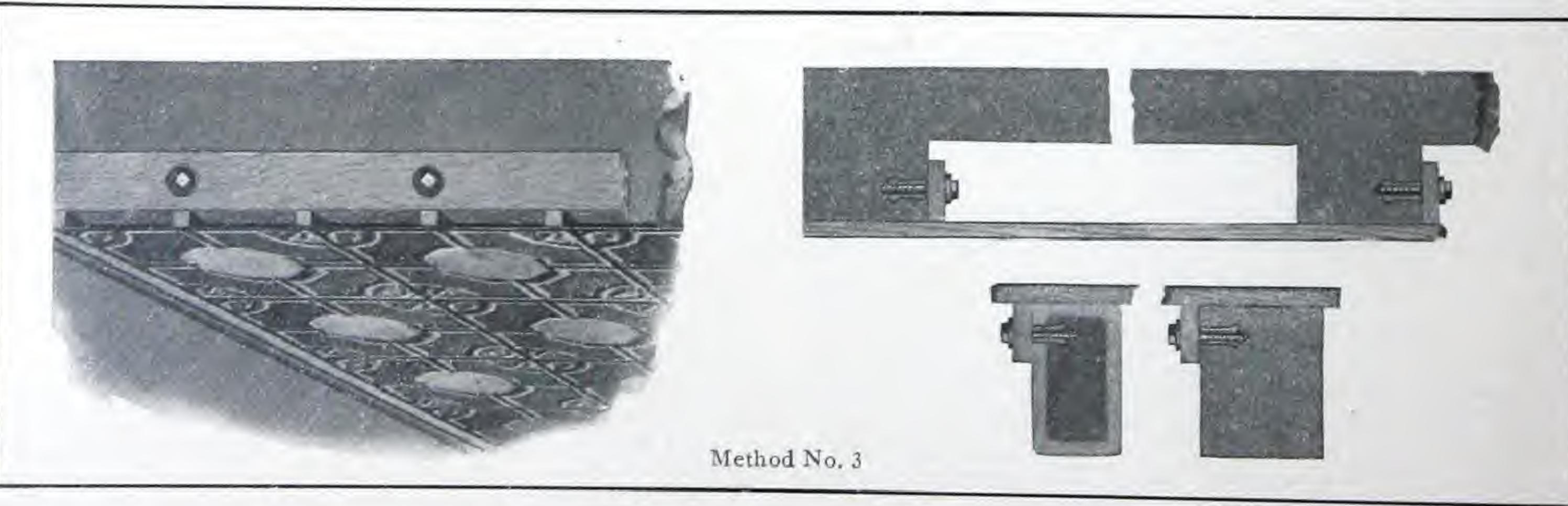
shows application of metal ceiling to concrete keyed wood strips, imbedded in the concrete when the floor is poured. $\frac{1}{8}$ by $1\frac{1}{4}$ -inch wood strips are nailed crosswise to the keyed strips, either 6 or 25 inches on center, according to the design.

Method No. 3

No. 3 shows method of attaching metal ceilings to the concrete beams. By this method high ceilings can be brought down even with the bottom of the beam.

Send Us Plans

and we will submit blueprints showing the best method of covering. We have made a study of this subject, so can furnish complete plans and practical information.



Method No. 3



A Few Installations Which Show the Wide Range of Adaptability of Milcor Invisible Joint Ceilings and Side Walls.

Conductor Heads, Bands, Band Ends



Style D



Style F

MILCOR Ornamental Conductor Heads, Bands and Band Ends are made for either round or square Conductor Pipe and furnished in Galvanized Open Hearth Steel, Galvanized Coppered Metal, Pure Zinc or Pure Copper.

Style D Heads, Round or Square, and Style E Bands, for Round or Square Conductor Pipe, are carried in four sizes: 2, 3, 4, and 5-inch.

Milcor Ornamental Paneled Conductor Band shown here is carried in four sizes, for 2, 3, 4, and 5-inch Conductor Pipe.

Styles F and G Conductor Heads are made in four sizes — 3, 4, 5, and 6 inches.

These standard Milcor Conductor Bands and Band Ends are highly satisfactory wherever the character of the building does not demand specially designed bands.

We can furnish Conductor Heads or Bands of special design, to harmonize with the architectural details of any building, made up as specified by architect's drawings, at any time. Our facilities for this class of work are unexcelled anywhere in the United States and it is always a pleasure for us to co-operate with you on special work of this sort.



Style E

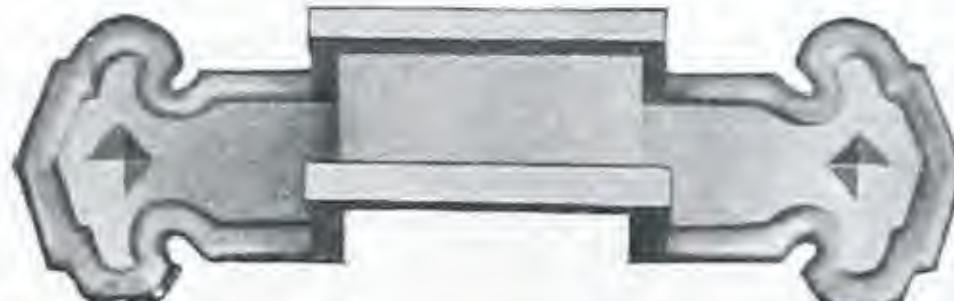


Style G



No. 3027

ORNAMENTAL CONDUCTOR
BAND ENDS
 $4\frac{1}{2} \times 4\frac{1}{2}$ inches each.

ORNAMENTAL PANELLED
CONDUCTOR PIPE BAND

No. 3052

ORNAMENTAL CONDUCTOR
BAND ENDS
 5×6 inches each.



MILCOR
Architectural
Zinc and Copper
Ornaments

No. 3101
Size, 32 x 30 inches.



No. 3500
BALUSTER
5 x 14 inches.



No. 3044
ORNAMENT
22 x 30 inches.

To meet architectural needs for decorative details on various types of buildings, we have designed and produced thousands of artistic metal ornaments, a few of which are shown here. The dies for these ornaments are at our Milwaukee Plant and we can make up any of these designs quickly in Zinc or Copper.

Society Emblems in metal, for interior or exterior decoration, are available in various sizes.

Architects, Contractors or Builders who desire some idea of their own in metal ornaments, will find that our expert modelers can reproduce even the most elaborate designs, in a manner that will please the most critical.

We solicit your consideration of our excellent facilities for this work and we can assure you of very satisfactory service.

No. 3102
Size, 32 x 30 inches.



No. 3070
LYRE
20 x 32 inches.



No. 3047
CAPITAL
Neck 6 in. Height 6 1/4 in.
Abacus 9 3/4 inches.



No. 3025. BRACKET.
Projection 25 inches. Height 10 inches.
Face 12 inches.

MILCOR

ARCHITECTURAL SHEET METAL



No. 3085
CARTOUCHE
16 x 24 inches.



No. 3075
COMPLETE BALLS
Locked together and
seamed on inside.
Made in Tin and Copper,
in two sizes, 2½ inch
and 3½ inch.



No. 3652
SPUN HALF BALLS
All Sizes.
Zinc and Copper.



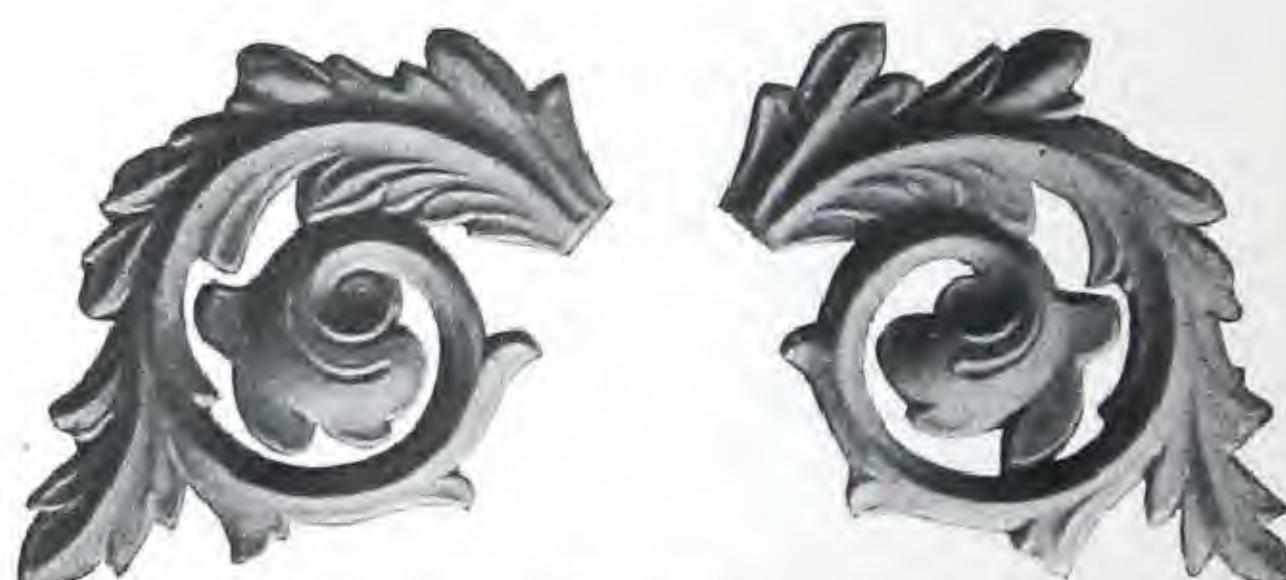
No. 3060
CARTOUCHE
20 x 27 inches.



No. 3034
ORNAMENT
4½ x 11 inches.



No. 3043
CARTOUCHE
8 x 10 inches.



No. 3410
SCROLL
Right
12½ x 17½ inches.
Left
12½ x 17½ inches.

A B C E

No. 3651. All Letters in Alphabet. Size 6 x 8 inches.

MILWAUKEE CORRUGATING COMPANY



No. 3750. ROPE MOULD. 1 inch wide.



No. 3751. ROPE MOULD. 2 inches wide.



No. 3752. BEAD MOULD. 1½ inches wide.



No. 3753. ENRICHMENT. 5 inches wide.



No. 3754. ENRICHMENT. 4½ inches wide.



No. 3757. ENRICHMENT. 3 inches wide.



No. 3756. ENRICHMENT. 9 inches wide.



No. 3018. ENRICHMENT. 6 inches wide.



No. 3758. MOULDING. 5½ inches wide. Nearly half round.



No. 3061
GARLAND
15½ x 16½ inches.



No. 3595
CAPITAL
Neck 9 in. Height 15 in.
Abacus 16 inches.

1905

No. 3650
FIGURES



No. 3050
CRESTING
ORNAMENT
4 x 7 inches.



No. 3051
CRESTING
ORNAMENT
6 x 9 inches.

MILCOR

ARCHITECTURAL SHEET METAL



No. 3089
Size, 18 x 18 inches.



Society and Lodge Emblems in All Sizes.



No. 3091
Size, 16 x 14½ inches.



No. 3093
Size, 18 x 18 inches.



No. 3090
Size, 18 x 18 inches.



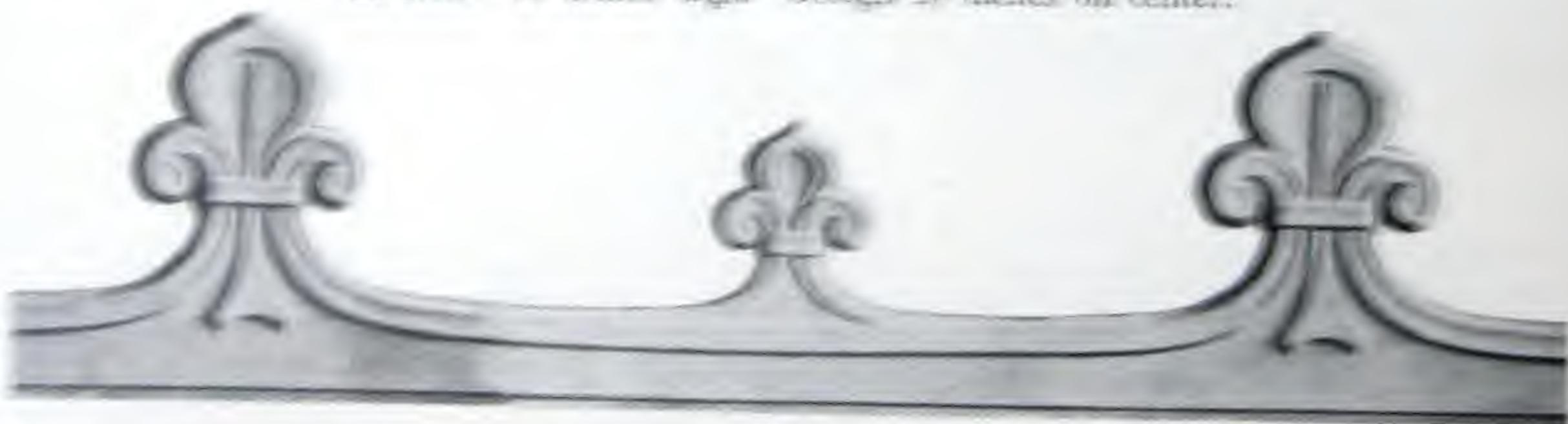
No. 3092
Size, 18 x 18 inches.



No. 3107. 12 inches high. Design 24 inches on center.



No. 3108. 18 inches high. Design 24 inches on center.



No. 3109. 18 inches high. Design 24 inches on center.



GARLAND

No. 3035 — 13 x 45 inches, in parts.
No. 3036 — 16 x 56 inches, in parts.

No. 3053

SCROLL
5 x 11½ inches.



No. 3625

GABLE
22 x 48 inches.
Different sizes made to order.



No. 3058

CRESTING CORNER
ORNAMENT
25 x 30 inches.



No. 3086

CRESTING
16 inches wide.



No. 3201

ROSETTE
6 x 6 inches.



No. 3755

CRESTING
7½ inches wide.



No. 3054

ENRICHMENT
4 inches wide.

MILCOR

ARCHITECTURAL SHEET METAL



No. 3303
FINIAL TOP
 $4\frac{1}{2} \times 12$ inches.



No. 3241
ORNAMENT
 3×7 inches.



No. 3056
DROP
 $6\frac{1}{2} \times 11$ inches.



No. 3302
FINIAL TOP
 4×10 inches.



Right, 6×18 inches.

No. 3055
RIBBON

Left, 6×18 inches.



With or Without Background.

No. 3064
CRESTING
10 inches wide.



No. 3072
SCROLL
Right, 5×13 inches.



Left, 5×13 inches.



No. 3065
SCROLL
Right, $2\frac{3}{4} \times 7\frac{1}{2}$ inches.
Left, $2\frac{3}{4} \times 7\frac{1}{2}$ inches.



No. 3063
RIBBON BOW
 $4\frac{1}{2} \times 14$ inches.



No. 3400. SCROLL.
Right, 4×9 inches.
Left, 4×9 inches.



No. 3401. SCROLL.
Right, $5\frac{1}{2} \times 10$ inches.
Left, $5\frac{1}{2} \times 10$ inches.



No. 3402. SCROLL.
Right, 3×8 inches.
Left, 3×8 inches.



No. 3403. SCROLL.
Right, 11×12 inches.
Left, 11×12 inches.



No. 3049
CRESTING
5 inches wide.



No. 3404. SCROLL.
Right, 9×11 inches.
Left, 9×11 inches.



No. 3031
FINIAL TOP
 7×18 inches.



No. 3057. GARLAND. 9×40 inches.



No. 3205. BRANCH. 10×20 inches.



No. 3067
ORNAMENT
 12×20 inches.

MILWAUKEE CORRUGATING COMPANY



No. 3032
LION HEAD
 $5 \times 5\frac{1}{2}$ inches.



No. 3585
LION HEAD
 11×12 inches.



No. 3033
LION HEAD
 8×10 inches.
 $3\frac{1}{2}$ inch
Projection



No. 3026
ORNAMENTAL
SPOUT OUTLET
List, for 2 and 3 inch Pipe.



No. 3550
GARLAND
 10×20 inches.



No. 3575
PANEL
 9×26 inches.



No. 3600
WREATH
 18×20 inches.



No. 3553
GARLAND
 12×43 inches.



No. 3551
GARLAND
 12×27 inches.



No. 3552
GARLAND
 9×26 inches.



No. 3045
WREATH
 $5 \times 6\frac{1}{2}$ inches.



No. 3042
DROP
 $1\frac{1}{2} \times 15$ in.



No. 3406
SCROLL — Right.
 7×15 inches.



No. 3407
SCROLL
 11×14 inches.



No. 3406
SCROLL — Left.
 7×15 inches.



No. 3408
SCROLL
Right, 6×12 inches.
Left, 6×12 inches.



ARCHITECTURAL SHEET METAL



No. 3150
LEAF
 $3\frac{1}{2} \times 7$ in.



No. 3151
LEAF
 $3 \times 4\frac{1}{2}$ in.



No. 3152
LEAF
 $2 \times 6\frac{1}{2}$ in.



No. 3153
LEAF
 5×12 in.



No. 3156
LEAF
 6×15 in.



No. 3155
LEAF
 9×13 in.



No. 3157
LEAF
 4×8 in.



No. 3154
LEAF
 5×12 in.



No. 3200
MODILLION
5-inch face, $5\frac{1}{2}$ inches deep, 12-inch projection.



No. 3040
BRACKET
FACE
 4×9 inches.



No. 3014
ROSETTE
 15×15 inches.



No. 3011
ROSETTE
 12×12 inches.



No. 3019
BRACKET
Projection 14 inches,
Height 8 inches.
Face 8 inches.



No. 3225
FLUTED
BALL
8 inches.



No. 3012
ROSETTE
 12×12 inches.



No. 3013
ROSETTE
 12×12 inches.



No. 3226
FLUTED BALL
9 inches.



No. 3230
FLUTED
ORNAMENT
 7×8 inches.



No. 3304
FINIAL TOP
 4×18 inches.



No. 3030
TWISTED
TOP
 6×18 inches.



No. 3232
FLUTED ORNAMENT
 12×26 inches.



No. 3240
FLUTED TOP
 $8 \times 8\frac{1}{2}$ inches.



No. 3231
FLUTED
ORNAMENT
 7×9 inches.



No. 3301
FINIAL TOP
 5×9 inches.



No. 3300
FINIAL TOP
 5×7 inches.

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MILCOR



No. 3071
ROSETTE
 3×3 inches.



No. 3023
ROSETTE
 $1\frac{1}{2} \times 1\frac{1}{2}$ inches.



No. 3000
ROSETTE
 3×3 inches.



No. 3001
ROSETTE
 4×4 inches.



No. 3002
ROSETTE
 4×4 inches.



No. 3003
ROSETTE
 $4\frac{1}{2} \times 4\frac{1}{2}$ inches.



No. 3004
ROSETTE
 $5\frac{1}{2} \times 5\frac{1}{2}$ inches.



No. 3021
ROSETTE
 $3\frac{1}{4} \times 3\frac{1}{4}$ inches.



No. 3022
ROSETTE
 3×3 inches.



No. 3016
ROSETTE
 5×5 inches.



No. 3017
ROSETTE
 $4\frac{1}{2} \times 4\frac{1}{2}$ inches.



No. 3020
ROSETTE
 4×4 inches.



No. 3005
ROSETTE
 $5\frac{1}{2} \times 5\frac{1}{2}$ inches.



No. 3007
ROSETTE
 6×6 inches.



No. 3038
 $1\frac{3}{4} \times 2$ inches.



No. 3009
ROSETTE
 6×10 inches.



No. 3015
ROSETTE
 8×8 inches.



No. 3100
SHELL
 $4 \times 4\frac{1}{2}$ inches.



CROCKET

No. 3039 — $3\frac{1}{2} \times 3\frac{1}{2}$
No. 3037 — 6×8
No. 3525 — 9×10



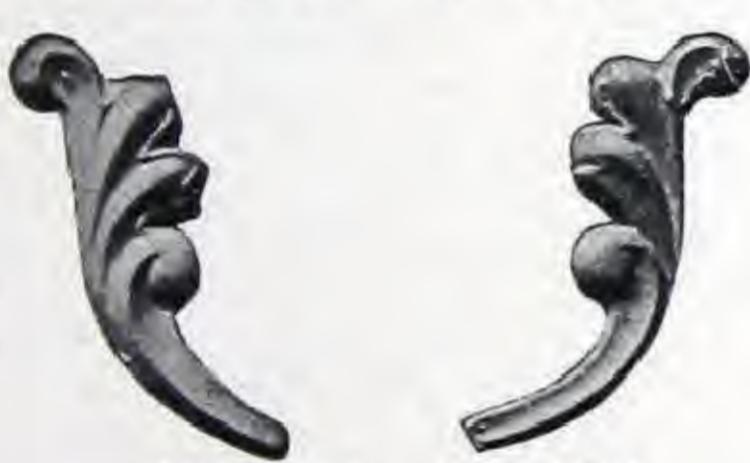
No. 3006
ROSETTE
 5×5 inches.



No. 3008
ROSETTE
 $4\frac{1}{2} \times 8$ inches.



No. 3041
BRACKET
Projection 12 inches.
Height 7 inches.
Face 7 inches.



No. 3405. SCROLL.
Right, $4\frac{1}{2} \times 12$ inches.
Left, $4\frac{1}{2} \times 12$ inches.
List, Right or Left.



No. 3069. Diameter 32 inches.



No. 3029. LYRE. $20\frac{1}{2} \times 26\frac{1}{2}$ inches.



No. 3010
ROSETTE
 7×7 inches.



No. 3409. SCROLL — Right and Left. 12×36 inches.

MILCOR ARCHITECTURAL

HERE is the code to the Figures shown in the Chart below. (Note: For detailed information on these products consult "The Milcor Manual" wherever Figures are followed by a single *; consult the "Manual Supplement" wherever Figures are followed by a single †; consult the "Milcor Architectural Sheet Metal Guide" wherever Figures are followed by double §; consult "Milcor Catalog No. 15" wherever Figures are followed by ‡; write for special circulars wherever Figures are followed by a "¶").

1. * Milcor Metal Lath.
 (a) Netmesh Diamond Expanded.
 (b) Stay-Rib No. 1.
 (c) $\frac{3}{8}$ -inch Stay-Rib No. 2.
2. ¶ Milcor "Cubro" Steel Channels.
3. * Milcor Regular Cold Rolled Steel Channels.
4. * Milcor "Expansion" Metal Corner Beads.
 (for inner and outer angles).
5. * Milcor "Expansion" Metal Casings.
 (for Door and Window Trim).
6. † Milcor Metal Window Stools.
7. * Milcor "Expansion" Base Screeds.
8. * Milcor Old Style Base Screeds.
9. ‡ Milcor Metal Chair Rail.

CLASSES OF BUILDINGS	FOR FIRESAFE, CRACKPROOF INTERIORS SPECIFY	FOR REINFORCED CONCRETE FLOORS IN BUILDINGS OF LIGHT OCCUPANCY SPECIFY	FOR PERMANENT FIRESAFE ROOFS SPECIFY
APARTMENTS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
BANKS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
CLUBS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
CHURCHES	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
DWELLINGS, over \$7,500	1 (a or b), 4, 5, 6, 7, 11.		15, 16
DWELLINGS, under \$7,500	5 (important economy); 1 (a or b) at 5 Vulnerable Points only; 4, 8.		15, 16
FARM BUILDINGS	5 (important economy); 1 (a or b) at Five Vulnerable Points only; 4, 8.		Dwellings: 15, 16; Barns: 17, 18.
HOTELS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
HOSPITALS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
INDUSTRIAL BUILDINGS	If Plastered interiors, Specify 1 (a, b, or c), 2, 3, 4, 5, 6, 7, 8.	14, 1 (c), 2, 3.	17, 16.
OFFICE BUILDINGS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
PUBLIC BUILDINGS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
SCHOOLS	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
STORES	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
THEATRES	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.
WELFARE [Y. M. C. A. Buildings, etc.]	1 (a or b), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.	14, 1 (c), 2, 3.	15, 16, 17.

Lump sum estimates or Quantity Surveys on those parts of buildings requiring

SHEET METAL CHART

10. † Milcor Metal Cove Base.
 11. * Milcor Concealed Metal Picture Molding.
 12. * Milcor Expansion Flashing.
 13. † Milcor Metal Chalk Rails.
 14. * Milcor Steel Domes.
 (for reinforced concrete floors).
 15. § Milcor "Titelock" Metal Tile for Roofs.
 (Spanish and American Metal Tile,
 Metal Shingles and Metal Slate).
 16. ‡ and § Roof Trimmings, including Finials,
 Ridging, Valleys, Ridge Roll,
 Flashing, etc.
 17. ‡ and § Sheet Metal and Roll Roofing.
18. ‡ and § Milcor Metal Siding, Corrugated,
 Brick and Rockface Stone.
 19. § Milcor Skylights, "Puttyless" and Standard.
 20. § Milcor Industrial Ventilators.
 21. § Milcor Barn Ventilators.
 22. ‡ and § Rain Carrying Equipment, including:
 (a) Crimpedge Gutter.
 (b) Ornamental (Special) Gutter.
 (c) Interlock Conductor Pipe.
 (d) One Piece Elbows.
 (e) One Piece Mitres.
 (f) Kuehn's Korrekt Kutoffs.
 (g) End and Drops.
23. § and ‡ Ornamental Cornices.
 24. § Marquise or Sheet Metal "Canopies".
 25. § Milcor "Invisible Joint" Metal Ceilings
 and Walls.
 26. ‡ Furnace Pipes and Elbows.
 27. * Wall Ties or Brick Bonds.
 28. ‡ Building Corners.
 29. ‡ Metal Barn Batten Strips.
 30. ‡ Hog House and Stock-Barn Windows.
 31. ¶ "Porto" All-Steel Garages.
 32. § Architectural Ornaments in Zinc and
 Copper.

FOR ADEQUATE VENTILATION SPECIFY	FOR SKYLIGHTS SPECIFY	FOR ARTISTIC METAL CEILINGS SPECIFY	FOR RAIN CARRYING EQUIPMENT SPECIFY	MISCELLANEOUS
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and Attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if Brick Veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and Attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and Attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Ideal throughout entire building).	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 28 (if frame construction) 23, 26, 32.
		25 (for Basement and attic only).	22 (in Copper, Zinc or Galv. Steel).	26, 31, 32, 12 (if stucco exterior); 27 (if brick veneered); 28 (if frame).
			22.	12 (if stucco exterior); 27 (if brick veneered); 26, 31.
Barns: 21, 30, 17 (for Vent. Systems).			22.	Dwellings: 26, 28 and 31. Barns: 29, 18 (also Stock Tanks, etc).
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
17 (for Vent. Systems); 19, 20.	19.	25 (for Foremen's offices and Administration offices).	22.	
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.).	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.).	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Ideal throughout entire building).	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 28 (if frame construction); 23, 26, 32, 13.
19, 20, 17 (for Vent. Systems).	19.	25.	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneer); 28, 18 (if frame); 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.
19, 20, 17 (for Vent. Systems).	19.	25 (Cellar and attic ceilings, corridors, etc.)	22 (in Copper, Zinc or Galv. Steel).	12 (if stucco exterior); 27 (if brick veneered); 23, 24, 26, 32.

Milcor Products will be gladly furnished without obligation on your part.

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MILWAUKEE CORRUGATING COMPANY

Manufacturers of

High-grade Sheet Metal Products, including in addition to the products featured in this volume, the following:

Milcor Metal Lath (Stay Rib No. 1, $\frac{3}{8}$ -inch Stay Rib No. 2 and Netmesh Diamond Expanded Lath)

"Expansion" Corner Beads, Casings, Base Screed and Flashing

Concealed Metal Picture Molding

Old Style Corner Beads, Base Screeds, Metal Window Stools, Cove Bases, Chalk Rails, etc.

Steel Channels, Steel Domes, "Crimpedge" Gutter

"Interlock" Conductor Pipe, Farm Specialties, Stock Tanks, Stock Barn Windows

Water and Feed Troughs, etc.

Steel Road Strips and Other Sheet Metal Products

*General Offices and Main Factories: MILWAUKEE, WISCONSIN
Branch Factories and Warehouses: Kansas City, Mo., La Crosse, Wis.*

Branch Sales Offices:

KANSAS CITY, MO.
Southwest Boulevard and "B" Street

CHICAGO, ILL.
11 South LaSalle Street

LA CROSSE, WIS.
2150 South Avenue

LITTLE ROCK, ARK.
120 West Markham Street

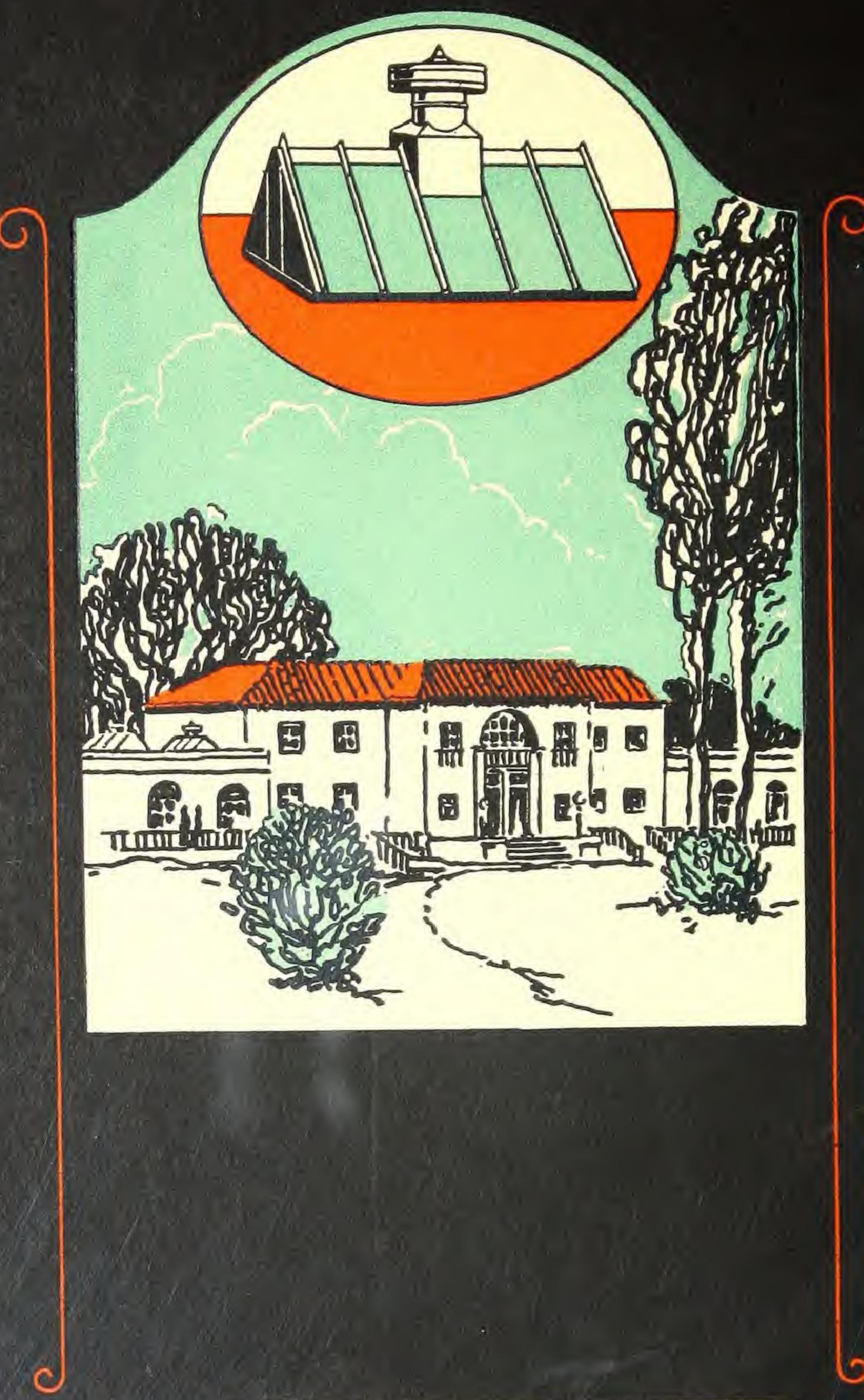
MINNEAPOLIS, MINN.
929 Lumber Exchange Building

BOSTON, MASS.
80 Boylston Street

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MILCOR, ARCHITECTURAL SHEET METAL GUIDE

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